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# DEPARTMENT OF DEFENSE IN-HOUSE RDT&E ACTIVITIES

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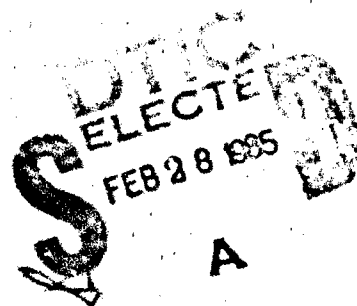
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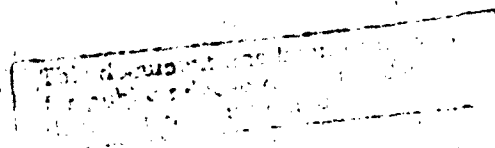
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DEPARTMENT OF DEFENSE IN-HOUSE RDTE ACTIVITIES

30 October 1983

Prepared for:

US ARMY MATERIEL DEVELOPMENT AND READINESS COMMAND  
5001 Eisenhower Avenue  
Alexandria, Virginia 22333



## FOREWORD

THIS REPORT WAS PREPARED FOR THE US ARMY MATERIEL DEVELOPMENT AND READINESS COMMAND AT THE DIRECTION OF THE DEPUTY CHIEF OF STAFF FOR RESEARCH, DEVELOPMENT, AND ACQUISITION. THIS EDITION IS THE SIXTEENTH OF A SERIES THAT WAS INITIATED IN 1966.

EACH IN-HOUSE RDTE ACTIVITY OF THE DEPARTMENT OF DEFENSE IS DESCRIBED ON ONE PAGE IN THIS COMPILATION. THE DATA FOR 1983 ARE SUMMARIZED IN TABLES PRECEDING THE MAIN TEXT AND CHARTS AND TABLES ARE PROVIDED FOR EACH SERVICE SHOWING ORGANIZATIONAL RELATIONSHIPS AND COMMAND CHAIN.

ALL CURRENT DOD RDTE ACTIVITIES WHICH MEET THE REPORT REQUIREMENT OF HAVING AT LEAST 25 PER CENT OF THEIR BUDGET IN RDTE FUNDS ARE LISTED IN THE CONTENTS ALPHABETICALLY WITHIN EACH DEPARTMENT. SOME FACILITIES WHICH DO NOT MEET THE REQUIREMENT PREVIOUSLY NOTED ARE ALSO LISTED BY SPECIAL REQUEST. ORGANIZATIONAL CHANGES DURING FY 1983 APPEAR IN APPENDIX I.

DOD INSTRUCTION 7700.9, WHICH HAS BEEN THE BASIS FOR THIS REPORT SINCE ITS INCEPTION, HAS BEEN REPLACED BY A TRI-SERVICE REGULATION, AR 70-63 NAVCOMPTIST 7044.5E, AFR 80-26, DNA 7700.9A, ENTITLED DOD IN-HOUSE RDTE ANNUAL ACTIVITIES REPORT, 1 SEPTEMBER 1981. APPENDIX II CONTAINS MANY OF THE DEFINITIONS USED IN THIS REPORT AND ARE PROVIDED AS AN ADDITIONAL AID IN USE OF THE REPORT. APPENDIX III LISTS SELECTED ABBREVIATIONS AND ACRONYMS. APPENDIX IV LISTS SELECTED KEY WORDS WITH PAGE REFERENCES.

EVERY EFFORT HAS BEEN MADE TO PROVIDE ACCURATE INFORMATION, PARTICULARLY FISCAL AND PERSONNEL DATA. ALL NUMBERS AND STATEMENTS HAVE BEEN THOROUGHLY EXAMINED AND, IN ALMOST ALL CASES, REVIEWED WITH THE SUBMITTING AGENCY TO INSURE CORRECTNESS AND CLARITY.

NO MAJOR CHANGES HAVE BEEN MADE IN THIS YEAR'S REPORT VIS-A-VIS LAST YEAR'S.

IT IS DESIRED THAT THIS PUBLICATION BE GIVEN WIDESPREAD DISTRIBUTION IN THE DOD LABORATORIES AS AN INTERNAL MANAGEMENT DOCUMENT AT THE DIRECTOR AND COMMANDING OFFICER LEVEL AS WELL AS AT THE BENCH LEVEL IN ORDER TO ALLOW PERSONNEL AN OPPORTUNITY TO FAMILIARIZE THEMSELVES WITH THE FUNCTIONAL CAPABILITIES OF OTHER DOD LABORATORIES. IT IS HOPED THAT BY THIS MEANS LABORATORY SCIENTISTS AND ENGINEERS WILL BE ENCOURAGED TO COMMUNICATE WITH EACH OTHER ON COMMON PROBLEMS OF INTEREST TO THEIR SERVICE LABORATORIES AS WELL AS TO COMMUNICATE WITH LABORATORIES OF THE OTHER SERVICES.

ADDITIONAL COPIES OF THIS DOCUMENT MAY BE OBTAINED BY WRITING THE DEFENSE TECHNICAL INFORMATION CENTER, BUILDING 5, CAMERON STATION, ALEXANDRIA, VIRGINIA 22314, OR U.S. ARMY MATERIEL DEVELOPMENT AND READINESS COMMAND, ATTENTION: AMCDE-PA, 5001 EISENHOWER AVENUE, ALEXANDRIA, VA 22333.

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# SUMMARY

## DEPARTMENT OF DEFENSE IN-HOUSE RDT&E FACILITIES

### PROGRAM DATA FOR FY 1983

	(MILLIONS)
TOTAL ANNUAL PROGRAM	12770.218
TOTAL INHOUSE PROGRAM	4896.013
TOTAL RDT&E PROGRAM	7750.218
TOTAL INHOUSE RDT&E	3101.407
TOTAL ANNUAL OPERATING COST	1328.718

### PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHD	TOTAL PROFESSIONALS
MILITARY	27324	677	6800
CIVILIAN	68844	3965	30238
TOTAL	96168	4642	37038

### PHYSICAL FACILITIES (END OF FY 1983)

ACRES	6251165
-------	---------

#### SPACE (THOUSANDS OF SQ FT)

LABORATORY	29509.083
ADMINISTRATIVE	10515.033
OTHER	59780.615
TOTAL	99804.731

#### COST (MILLIONS)

REAL PROPERTY	4696.813
EQUIPMENT	5251.375
TOTAL	9948.188

TABLE 1. ARMY RDT&amp;E ACTIVITIES, PROGRAM AND PERSONNEL DATA, FY 1983

INSTALLATION	FUNDING DATA (MILLIONS \$)				PERSONNEL DATA											
	TOTAL	INHOUSE	TOTAL	INHOUSE	TOTAL	MIL	CIV	PHD	PHD	PHD	PHD	PROF	PROF	PROF	PROF	PROF
	RDTE	RDTE	RDTE	RDTE	RDTE	RDTE	RDTE	RDTE	RDTE	RDTE	RDTE	RDTE	RDTE	RDTE	RDTE	RDTE
AEROMEDICAL RESEARCH LABORATORY	9,947	8,858	7,701	6,612	79	78	16	8	30	19						
AIR DEFENSE BOARD	10,786	7,808	4,325	3,684	102	88	0	0	6	12						
AIRBORNE BOARD	7,654	7,357	2,291	1,994	110	39	0	0	17	6						
AIRBORNE AND ENGINEER BOARD	12,107	12,107	6,377	6,377	197	100	0	1	74	21						
ARMY RESEARCH OFFICE	85,933	0,076	85,933	0,000	2	125	0	39	2	39						
ATMOSPHERIC SCIENCES LABORATORY	31,223	20,588	20,588	17,573	181	341	0	29	3	110						
AVIATION BOARD	8,533	7,911	5,322	5,322	79	38	0	1	26	9						
AVIATION DEVELOPMENT TEST ACTIVITY	18,965	18,965	10,223	10,223	143	93	0	0	26	27						
AVIATION ENGINEERING FLIGHT ACTIVITY	8,604	8,196	7,283	6,782	65	100	0	0	24	32						
AVIATION RESEARCH & TECHNOLOGY LABORATORIES	34,844	13,231	20,851	17,573	16	359	1	27	13	258						
AVIONICS R & D ACTIVITY	306,159	49,854	58,629	41,503	25	691	0	111	8	414						
BALISTIC RESEARCH LABORATORY	138,210	79,665	102,490	51,920	95	503	6	71	39	596						
BELVOIR R & D CENTER	19,630	12,434	7,035	7,035	263	22	0	0	31	11						
CHEMICAL R&D CENTER	37,971	9,567	24,344	7,816	12	167	0	3	8	98						
COLD REGIONS R&E LABORATORY	5,664	5,664	2,818	2,818	59	31	0	0	41	12						
COMBAT SURVEILLANCE & TGT ACQUISITION LAB	151,451	47,690	110,497	35,908	73	551	0	14	22	362						
COMMUNICATIONS - ELECTRONICS BOARD	23,998	15,631	19,445	12,506	11	208	0	29	11	141						
CONSTRUCTION ENGINEERING RESEARCH LAB	51,229	35,931	43,453	30,253	143	608	2	14	21	73						
DUGWAY PROVING GROUND	48,001	30,463	33,533	17,903	610	212	0	0	29	82						
ELECTRONIC WARFARE LABORATORY	170,437	31,049	92,926	22,855	84	403	1	6	75	206						
ELECTRONICS TECHNOLOGY AND DEVICES LAB	74,685	19,962	68,325	17,682	1	291	0	40	1	184						
ENGINEER TOPOGRAPHIC LABORATORIES	45,883	12,990	42,883	10,983	14	286	1	18	8	169						
ENGINEER WATERWAYS EXPERIMENT STATION	91,750	77,073	29,329	25,647	23	1538	1	101	23	590						
FIELD ARTILLERY BOARD	5,467	5,467	2,114	2,114	131	42	0	0	36	5						
FIRE CONTROL & SMALL CAL. WPNS SYSTS LAB	104,091	83,676	40,830	27,812	14	650	0	28	14	415						
HARRY DIAMOND LABORATORIES	134,185	62,486	68,872	37,426	6	1169	0	48	6	362						
HUMAN ENGINEERING LABORATORY	18,729	14,378	14,977	10,998	35	179	1	18	10	117						
INFANTRY BOARD	5,756	5,756	2,303	2,303	124	57	0	0	2	7						
INSTITUTE OF DENTAL RESEARCH	4,479	3,735	2,526	1,782	82	21	1	2	24	11						
INSTITUTE OF SURGICAL RESEARCH	8,592	7,834	4,144	3,586	157	79	16	4	46	31						
INTELLIGENCE & SECURITY BOARD	7,932	2,311	5,546	2,218	87	26	0	2	123	11						
KHARJALEIN MISSILE RANGE, MARSHALL ISLANDS	177,971	8,125	176,276	6,430	27	102	0	1	19	56						
LARGE CALIBER WEAPONS SYSTEMS LAB	187,453	133,167	120,064	66,974	27	1734	1	82	19	1050						
LETTERMAN ARMY INSTITUTE OF RESEARCH	16,521	13,065	12,242	8,786	158	117	33	14	97	51						
MATERIALS AND MECHANICS RESEARCH CENTER	46,445	24,495	40,722	19,698	16	610	1	73	19	238						
MATERIEL SYSTEMS ANALYSIS ACTIVITY	29,582	22,291	23,363	17,321	31	449	0	22	10	372						
MATERIEL TESTING DIRECTORATE	110,573	104,415	57,210	54,273	210	702	6	6	38	333						
MEDICAL BIOENGINEERING R&D LABORATORY	17,080	6,666	15,992	5,578	33	103	2	17	25	47						
MEDICAL R & D COMMAND	15,164	14,362	12,118	11,216	61	140	29	1	55	2						
MEDICAL RESEARCH INSTITUTE CHEMICAL DEFENSE	37,618	17,005	35,239	14,426	85	159	33	22	47	69						
MEDICAL RSCH INST OF INFECTIOUS DISEASES	34,564	23,081	27,916	16,433	305	205	46	41	104	92						
MISSILE LABORATORY	258,460	104,426	177,053	69,028	45	1170	4	70	31	776						
NAT'L R & D CENTER	67,733	55,417	47,813	36,859	105	1092	3	77	40	391						
HIGH VISION & ELECTRO OPTICS LABORATORY	172,289	32,036	75,088	25,614	32	470	0	39	6	216						
RES. & DEV. INST FOR BEHAVIORAL & SOCIAL SCI	50,239	19,132	39,892	17,537	31	374	0	166	30	271						
RSCH INSTITUTE OF ENVIRONMENTAL MEDICINE	7,145	6,508	5,516	4,879	77	97	6	18	39	59						

SIGNALS WARFARE LABORATORY  
TANK-AUTO COMMAND R & D CENTER  
TROPIC TEST CENTER  
WALTER REED ARMY INSTITUTE OF RESEARCH  
WHITE SANDS MISSILE RANGE  
YUMA PROVING GROUND

105.954	8.495	46.056	5.739	51	180	0	5	10	93
697.659	35.282	101.149	24.194	36	577	0	14	21	218
5.717	5.652	3.996	3.931	71	0	0	2	8	14
67.280	48.344	53.062	34.126	411	590	82	59	386	278
282.361	179.331	235.366	147.861	895	2742	17	59	478	1102
64.868	55.207	42.312	38.687	445	693	0	0	46	58
4304.055	1735.223	2501.298	1149.315	6278	23548	310	1469	2407	10902

TOTALS

TABLE 2. ARMY ROT&amp;E FACILITIES DATA, FY 1983

INSTALLATION	SPACE AND PROPERTY SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	ACRES	LABORATORY	ADMIN	OTHER	REAL PROPERTY	EQUIPMENT
AEROMEDICAL RESEARCH LABORATORY						
AIR DEFENSE BOARD						
AIRBORNE BOARD						
ARMOR AND ENGINEER BOARD						
ARMY RESEARCH OFFICE						
ATMOSPHERIC SCIENCES LABORATORY						
AVIATION BOARD						
AVIATION DEVELOPMENT TEST ACTIVITY						
AVIATION ENGINEERING FLIGHT ACTIVITY						
AVIATION RESEARCH & TECHNOLOGY LABORATORIES						
AVIONICS R & D ACTIVITY						
BALLISTIC RESEARCH LABORATORY						
BELVOIR R & D CENTER						
CHEMICAL R&D CENTER						
COLD REGIONS R&E LABORATORY						
COMBAT SURVEILLANCE & TGT ACQUISITION LAB						
COMMUNICATIONS - ELECTRONICS BOARD						
CONSTRUCTION ENGINEERING RESEARCH LAB						
DUGWAY PROVING GROUND						
ELECTRONIC PROVING GROUND						
ELECTRONIC WARFARE LABORATORY						
ELECTRONICS TECHNOLOGY AND DEVICES LAB						
ENGINEER TOPOGRAPHIC LABORATORIES						
ENGINEER WATERWAYS EXPERIMENT STATION						
FIELD ARTILLERY BOARD						
FIRE CONTROL & SMALL CAL. WPNS SYSTS LAB						
HARRY DIAMOND LABORATORIES						
HUMAN ENGINEERING LABORATORY						
INFANTRY BOARD						
INSTITUTE OF DENTAL RESEARCH						
INSTITUTE OF SURGICAL RESEARCH						
INTELLIGENCE & SECURITY BOARD						
KUWAJALEIN MISSILE RANGE, MARSHALL ISLANDS						
LARGE CALIBER WEAPONS SYSTEMS LAB						
LETTERMAN ARMY INSTITUTE OF RESEARCH						
MATERIALS AND MECHANICS RESEARCH CENTER						
MATERIEL SYSTEMS ANALYSIS ACTIVITY						
MATERIEL TESTING DIRECTORATE						
MATERIEL BIOENGINEERING R&D LABORATORY						
MEDICAL R & D COMMAND						
MEDICAL RESEARCH INSTITUTE CHEMICAL DEFENSE						
MEDICAL RSCH INST OF INFECTIOUS DISEASES						
MISSILE LABORATORY						
NATICK R & D CENTER						
NIGHT VISION & ELECTRO OPTICS LABORATORY						
RESEARCH INST FOR BEHAVIORAL & SOCIAL SCI						
RSCH INSTITUTE OF ENVIRONMENTAL MEDICINE						
FT. RUCKER, AL.	54	98.255	20.000	18.351	7.612	12.285
EL PASO, TX.	0	29.172	37.090	19.132	1.169	14.781
FT. BRAGG, N.C.	27	3.978	3.914	39.390	0.970	7.920
FT. KNOX, KY.	2	63.365	50.454	88.069	1.455	5.904
DURHAM, N.C.	6	0.000	26.500	0.000	0.000	0.633
WHITE SANDS PR, N.M.	15	49.467	26.663	85.658	7.477	23.757
FT. RUCKER, AL.	1196	0.000	18.826	20.470	0.000	1.141
EDWARDS AFB, CA.	19	9.200	41.218	130.776	1.473	28.865
MOFFETT FIELD, CA.	127	88.848	58.673	124.800	4.042	26.977
FT. MONMOUTH, N.J.	0	52.450	13.140	19.100	0.000	10.781
ABERDEEN PROV. GR., MD.	1920	511.780	11.200	40.942	15.426	47.949
FT. BELVOIR, VA.	1052	353.082	186.816	260.237	18.071	37.028
ABERDEEN PROV. GR., MD.	1750	434.009	211.091	549.036	21.815	32.656
HANOVER, N.H.	20	80.787	30.027	133.024	8.835	9.618
647155		0.000	18.205	236.033	10.336	9.283
APO SEATTLE, WA.	35	52.324	6.139	10.589	0.680	7.050
FT. MONMOUTH, N.J.	7	0.000	20.950	0.498	0.215	1.416
FT. CORDON, GA.	0	59.031	79.011	11.200	0.000	22.500
FT. MONMOUTH, N.J.	30	56.785	34.750	20.019	6.500	6.000
CIANPAIGH, IL.	840911	104.875	201.133	1643.266	80.671	33.980
67000		0.150	42.685	232.393	8.500	23.100
FT. MONMOUTH, N.J.	325	163.877	26.617	37.314	6.078	55.580
FT. BELVOIR, VA.	0	81.909	5.537	4.467	0.000	14.000
VICKSBURG, MS.	33	90.722	7.000	13.300	6.000	12.443
FT. SILL, OK.	951	1739.308	334.925	168.824	31.259	44.996
DOVER, N.J.	0	13.790	35.340	17.709	0.000	3.107
WASHINGTON, D.C.	2316	167.247	103.974	4.576	8.305	26.060
ABERDEEN PROV. GR., MD.	72	111.524	7.056	21.400	53.557	46.754
FT. BENNING, GA.	1	0.000	32.203	32.885	8.112	8.507
WASHINGTON, D.C.	4	9.852	5.696	14.153	3.000	1.102
FT. SAM HOUSTON, TX.	10	26.424	1.000	29.400	2.548	2.702
FT. HUACHUCA, AR.	1361	0.000	207.012	2258.235	0.616	5.709
APO SAN FRANCISCO	11	189.951	219.627	50.343	237.550	246.723
DOVER, N.J.	9	83.520	62.091	274.940	17.732	27.272
PRESIDIO, S.F., CA.	37	352.000	88.261	48.375	34.514	10.556
WATERTOWN MA	4	2.140	100.276	1.715	15.294	21.919
ABERDEEN PROV. GROUND, MD	22865	720.999	4.351	248.742	2.070	1.239
ABERDEEN PROV. GR., MD.	5	45.193	27.300	34.108	22.176	44.865
FT. DETRICK, MD.	1	0.000	38.757	0.000	3.588	3.549
FT. DETRICK, MD.	31	36.426	15.345	99.429	9.632	0.997
ABERDEEN PROV. GR., MD	43	104.136	20.718	209.699	9.246	6.160
FT. DETRICK, MD.	11000	664.000	224.000	252.000	18.763	11.000
REDSTONE ARSENAL, AL.	24	527.067	55.340	277.817	96.400	90.000
NATICK, MA.	38	180.539	27.186	20.000	28.497	22.850
FT. BELVOIR, VA.	0	3.008	51.310	3.191	32.000	31.237
ALEXANDRIA, VA.	4	60.442	18.793	28.647	0.550	0.700
NATICK, MA.					4.084	6.704

SIGNALS WARFARE LABORATORY  
TANK-AUTO COMMAND R & D CENTER  
TROPIC TEST CENTER  
WALTER REEG ARMY INSTITUTE OF RESEARCH  
WHITE SANDS MISSILE RANGE  
YUMA PROVING GROUND

VINT HILL, VA.  
WARREN, MI.  
FT. CLAYTON, C.Z.  
WASHINGTON, D.C.  
WHITE SANDS, N.M.  
YUMA, AZ

10	3.986	29.145	6.963	3.500	5.800
11	257.152	33.234	111.777	39.600	117.445
2625	18.000	35.925	88.556	0.874	3.406
203	383.274	58.600	0.000	10.080	20.500
1748490	52.945	583.920	4429.591	225.326	252.826
838061	0.832	108.153	1484.359	59.611	75.704
4189878	8655.729	3828.273	15141.965	1184.241	1007.362

TOTALS



TABLE 3. NAVY ROT&E ACTIVITIES, PROGRAM AND PERSONNEL DATA, FY 1985

INSTALLATION	FUNDING DATA (MILLIONS \$)				PERSONNEL DATA											
	TOTAL	INHOUSE	ROT&E	TOTAL	INHOUSE	ROT&E	TOTAL	MIL	CIV	TOTAL	PHD	MIL	CIV	PHD	PROF	PROF
AEROSPACE MEDICAL RESEARCH LABORATORY	4,388	4,195	3,683	171,072	80,647	80,647	254	225	5	43	63	135	186	294	186	294
AIR DEVELOPMENT CENTER	318,349	30,411	42,429	28,667	1422	2119	5	6	294	186	294	186	294	186	294	186
AIR PROPULSION CENTER	44,209	64,651	130,269	92,882	0,000	0,000	81	34	0	0	12	20	20	20	20	20
AIR TEST CENTER	261,567	4,765	0,300	4,014	3,158	3,158	34	51	3	6	7	27	27	27	27	27
ATLANTIC FLEET WEAPONS TRAINING FACILITY	31,741	4,741	3,885	4,014	2,900	2,900	9	6	4	0	5	0	5	0	5	0
BIODYNAMICS LABORATORY	5,209	3,209	2,900	32,741	17,047	17,047	16	345	0	27	7	153	153	153	153	153
CIVIL ENGINEERING LABORATORY	39,058	21,108	3,659	2,655	2,355	2,355	1	56	0	1	1	36	36	36	36	36
CLOTHING & TEXTILE RESEARCH FACILITY	3,964	40,132	45,215	24,846	87,503	87,503	76	2478	1	118	23	1206	1206	1206	1206	1206
COASTAL SYSTEMS CENTER	80,727	113,757	164,647	0,874	0,839	0,839	29	15	8	4	13	6	6	6	6	6
DAVID M. TAYLOR SHIP R&D CENTER	225,056	1,733	1,698	5,177	2,265	2,265	14	32	2	8	5	27	27	27	27	27
DENTAL RESEARCH INSTITUTE	6,276	2,849	5,177	9,404	5,617	5,617	40	164	0	3	9	47	47	47	47	47
ENVIRONMENTAL PREDICTION RESEARCH FACILITY	14,843	10,530	9,404	2,558	14,088	14,088	30	60	11	10	14	24	24	24	24	24
EXPLOSIVE ORDNANCE DISPOSAL FACILITY	4,244	3,563	3,239	15,149	2,221	2,221	31	58	4	2	20	9	9	9	9	9
HEALTH RESEARCH CENTER	20,521	3,111	2,221	3,585	3,685	3,685	29	202	12	17	13	41	41	41	41	41
MEDICAL RESEARCH INSTITUTE	4,718	4,718	3,585	46,252	18,341	18,341	16	312	1	76	11	201	201	201	201	201
MEDICAL RESEARCH UNIT NO.2	48,398	20,308	243,232	121,043	269	2582	2	181	49	1382	2	181	49	1382	2	181
MEDICAL RESEARCH UNIT NO.3	391,500	182,198	501,989	21,517	33	408	5	75	25	97	5	75	25	97	5	75
OCEAN R & D ACTIVITY	610,491	23,249	5,116	3,778	87	60	0	0	0	3	6	6	6	6	6	6
OCEAN SYSTEMS CENTER	9,330	6,279	5,116	210,500	146,436	146,436	953	3805	10	14	359	1010	1010	1010	1010	1010
OFFICE OF NAVAL RESEARCH	486,861	281,056	17,604	11,696	34	293	4	81	17	208	4	81	17	208	4	81
ORDNANCE MISSILE TEST FACILITY	23,608	15,941	17,604	302,650	163,130	163,130	137	3090	2	664	40	1505	1505	1505	1505	1505
PACIFIC MISSILE TEST CENTER	341,049	185,474	1,995	1,995	36	55	8	10	14	24	8	10	14	24	8	10
PERSONNEL RESEARCH & DEVELOPMENT CENTER	2,994	2,994	1,995	279,827	127,319	127,319	103	5089	0	241	35	2307	2307	2307	2307	2307
RESEARCH LABORATORY	507,924	216,508	37,259	6,829	41	22	0	2	9	13	0	2	9	13	0	2
SUBMARINE MEDICAL RESEARCH LABORATORY	50,554	9,928	37,259	174,225	94,004	94,004	79	2892	0	86	30	1640	1640	1640	30	1640
SURFACE WEAPONS CENTER	385,854	164,772	174,225	245,008	173,281	173,281	570	4152	0	131	38	1602	1602	1602	38	1602
UNDERSEA RANGES DEPARTMENT	459,324	276,079	5,134	5,134	3,982	3,982	147	105	0	1	24	55	55	55	24	55
UNDERWATER SYSTEMS CENTER	13,765	11,945	5,134	2710,465	1270,119	1270,119	4957	32228	160	1886	1252	14096	14096	14096	1252	14096
WEAPONS EVALUATION FACILITY	4404,107	1952,921	2710,465	1270,119	1270,119	1270,119	4957	32228	160	1886	1252	14096	14096	14096	1252	14096
TOTALS	4404,107	1952,921	2710,465	1270,119	1270,119	1270,119	4957	32228	160	1886	1252	14096	14096	14096	1252	14096

TABLE 4. NAVY ROTEE FACILITIES DATA, FY 1983

INSTALLATION	SPACE AND PROPERTY SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	ACRES	LABORATORY	ADMIN	OTHER	REAL PROPERTY	EQUIPMENT
AEROSPACE MEDICAL RESEARCH LABORATORY	7	111.293	6.796	8.052	3.130	4.191
AIR DEVELOPMENT CENTER	840	852.000	83.000	654.000	37.900	52.000
AIR PROPULSION CENTER	68	488.390	27.962	92.816	52.088	11.873
AIR TEST CENTER	7156	88.619	425.407	4681.507	158.478	45.096
ATLANTIC FLEET WEAPONS TRAINING FACILITY	3696	0.006	14.957	182.152	13.810	115.000
BIOCYNANICS LABORATORY	1	35.702	24.452	0.000	2.070	0.279
CIVIL ENGINEERING LABORATORY	5	77.625	8.731	34.646	1.000	5.521
CLOTHING & TEXTILE RESEARCH FACILITY	32	112.965	77.463	16.493	7.300	4.853
COASTAL SYSTEMS CENTER	1	9.160	10.000	3.600	0.865	0.746
DAVID W. TAYLOR SHIP RAO CENTER	648	342.248	47.291	363.488	47.942	22.481
DENTAL RESEARCH INSTITUTE	325	1705.165	99.405	328.172	73.770	28.446
ENVIRONMENTAL PREDICTION RESEARCH FACILITY	1	21.264	6.001	9.318	0.000	1.032
EXPLOSIVE ORDNANCE DISPOSAL FACILITY	0	5.446	14.040	5.098	0.000	1.355
HEALTH RESEARCH CENTER	1172	71.578	22.176	90.643	5.987	4.201
MEDICAL RESEARCH INSTITUTE	1	19.052	7.159	0.000	0.147	1.527
MEDICAL RESEARCH UNIT NO.2	4	159.533	11.720	47.210	7.059	12.673
MEDICAL RESEARCH UNIT NO.3	5	89.472	8.962	61.072	0.000	0.253
OCEAN R & D ACTIVITY	5	51.002	23.881	83.069	9.054	1.022
OFFICE OF NAVAL RESEARCH	2719	1280.660	201.210	210.070	10.048	11.000
ORDNANCE MISSILE TEST FACILITY	0	0.000	81.295	2.020	0.000	0.000
PACIFIC MISSILE TEST CENTER	95	9.372	25.131	180.078	5.723	4.049
PERSONNEL RESEARCH & DEVELOPMENT CENTER	27084	978.549	341.259	3532.077	169.270	145.213
RESEARCH LABORATORY	1072	2346.281	192.677	481.382	98.500	118.917
SUBMARINE MEDICAL RESEARCH LABORATORY	1	40.514	14.099	0.000	1.315	1.889
SURFACE WEAPONS CENTER	5347	1656.078	180.751	1306.003	105.975	150.289
UNCLERSEA RANGES DEPARTMENT	1042	82.178	12.464	331.127	26.938	1.507
UNDERWATER SYSTEMS CENTER	381	1077.751	260.348	498.049	54.651	65.500
WEAPONS CENTER	1127117	1746.309	263.692	4192.824	233.143	114.368
WEAPONS EVALUATION FACILITY	7	23.000	34.000	95.000	9.600	1.461
TOTALS	1178834	13553.648	2536.976	17499.448	1189.812	1078.379

TABLE 5. AIR FORCE ROTAE ACTIVITIES, PROGRAM AND PERSONNEL DATA, FY 1963

INSTALLATION	FUNDING DATA (MILLIONS \$)				PERSONNEL DATA									
	TOTAL		IMHOUSE		TOTAL		IMHOUSE		TOTAL		IMHOUSE		TOTAL	
	ROTAE	PROF	ROTAE	PROF	ROTAE	PROF	ROTAE	PROF	ROTAE	PROF	ROTAE	PROF	ROTAE	PROF
AERO PROPULSION LABORATORY	119.123	7.910	117.755	6.542	339	3	27	39	218	3	27	39	218	3
AEROSPACE MEDICAL RESEARCH LABORATORY	32.160	16.556	30.557	16.953	137	152	27	27	65	103	27	27	65	103
ARMAMENT DIVISION	1183.937	298.460	539.266	167.467	4680	2081	2	24	514	942	2	24	514	942
ARMAMENT LABORATORY	74.239	30.624	68.571	29.338	165	348	4	15	153	246	4	15	153	246
ARNOLD ENGINEERING DEVELOPMENT CENTER	255.371	60.928	221.088	56.145	167	221	4	5	80	37	4	5	80	37
AVIONICS LABORATORY	247.332	23.540	242.941	18.699	154	603	5	37	120	404	5	37	120	404
EASTERN SPACE & MISSILE CENTER	360.235	72.177	0.000	0.000	2769	1242	7	0	476	101	7	0	476	101
ENGINEERING & SERVICES CNTR / RD	18.006	4.153	16.230	1.610	82	19	6	2	45	17	6	2	45	17
FLIGHT DYNAMICS LABORATORY	165.372	11.762	160.693	6.083	183	648	2	34	135	432	2	34	135	432
FLIGHT TEST CENTER	259.321	195.535	151.061	110.132	3949	2244	2	15	164	316	2	15	164	316
FRANK J. SEILER RESEARCH LABORATORY	2.075	2.075	1.167	1.167	23	9	9	1	17	5	9	1	17	5
GEOPHYSICS LABORATORY	82.141	33.087	78.407	29.637	122	488	3	98	39	304	3	98	39	304
HUMAN RESOURCES LABORATORY	53.956	14.192	48.156	11.330	134	240	11	47	75	145	11	47	75	145
MATERIALS LABORATORY	144.814	5.984	83.472	4.118	49	312	3	56	44	237	3	56	44	237
OFFICE OF SCIENTIFIC RESEARCH	116.300	1.724	114.576	0.000	45	98	13	21	19	25	13	21	19	25
ROCKET PROPULSION LABORATORY	48.649	18.603	44.605	14.559	174	252	1	17	67	108	1	17	67	108
ROME AIR DEVELOPMENT CENTER	323.608	37.485	248.182	31.805	224	1108	5	62	114	629	5	62	114	629
SCHOOL OF AEROSPACE MEDICINE	30.223	21.018	23.301	14.096	368	265	48	39	81	102	48	39	81	102
WEAPONS LABORATORY	242.223	95.944	224.824	78.545	649	523	30	57	427	308	30	57	427	308
WESTERN SPACE AND MISSILE CENTER	142.188	139.888	2.000	0.000	442	415	2	3	302	306	2	3	302	306
4950 TEST WING	104.268	75.024	81.321	52.140	918	1046	0	0	41	102	0	0	41	102
6585TH TEST GROUP	41.198	24.662	28.839	19.386	322	276	2	3	78	101	2	3	78	101
TOTALS	4047.523	1193.336	2527.012	670.530	16001	12329	189	592	3095	5187	189	592	3095	5187

TABLE 6. AIR FORCE ROTAE FACILITIES DATA, FY 1963

INSTALLATION	SPACE AND PROPERTY				COST (MILLIONS \$)	
	ACRES	LABORATORY	ADHIN	OTHER	REAL	EQUIPMENT
AERO PROPULSION LABORATORY	44	266.165	47.779	123.889	79.080	34.760
AEROSPACE MEDICAL RESEARCH LABORATORY	30	1.257	105.887	105.887	11.062	27.047
ARMAMENT DIVISION	463796	324.756	953.693	10173.933	342.174	293.690
ARMAMENT LABORATORY	0	0.000	0.000	0.000	0.000	0.000
ARMOLD ENGINEERING DEVELOPMENT CENTER	39081	1141.415	207.163	1715.051	396.000	86.551
AVIONICS LABORATORY	220	229.369	9.483	405.264	45.602	99.989
EASTERN SPACE & MISSILE CENTER	26343	177.723	1213.525	4510.214	421.032	326.086
ENGINEERING & SERVICES CNTR / RO	3	12.000	14.000	0.000	1.960	2.656
FLIGHT DYNAMICS LABORATORY	76	546.654	5.100	168.182	57.076	57.043
FLIGHT TEST CENTER	218767	144.407	311.038	7666.947	287.980	157.247
FRANK J SELLER RESEARCH LABORATORY	0	190.000	3.000	0.000	1.820	2.628
GEOPHYSICS LABORATORY	336	393.389	14.821	25.883	9.871	35.279
HUMAN RESOURCES LABORATORY	5	81.180	58.219	56.132	6.521	75.215
MATERIALS LABORATORY	15	168.750	117.941	54.123	23.340	66.433
OFFICE OF SCIENTIFIC RESEARCH	0	0.000	36.688	5.128	0.000	0.000
ROCKET PROPULSION LABORATORY	68345	419.046	66.846	4.780	126.000	27.180
ROME AIR DEVELOPMENT CENTER	1517	764.945	52.839	182.271	29.595	56.243
SCHOOL OF AEROSPACE MEDICINE	46	436.163	53.341	198.237	18.120	24.556
WEAPONS LABORATORY	702	655.000	130.000	182.000	75.595	93.530
WESTERN SPACE AND MISSILE CENTER	55860	914.964	568.103	607.327	180.000	300.000
4950 TEST WING	205	0.000	132.249	780.414	14.260	748.918
6585TH TEST GROUP	7052	386.000	12.000	165.000	188.657	49.375
TOTALS	602443	7273.183	4133.737	27082.662	2309.345	2549.426

TABLE 7. DEPARTMENT OF DEFENSE RAD ACTIVITIES, PROGRAM AND PERSONNEL DATA, FY 1963

INSTALLATION	FUNDING DATA (MILLIONS \$)				PERSONNEL DATA						
	TOTAL	INHOUSE	TOTAL RDT&E	INHOUSE RDT&E	TOTAL MIL	CIV	TOTAL PHD	MIL	CIV	PHD	PROF
ARMED FORCES RADIOBIOLOGY RSCH. INSTITUTE	14.533	14.533	11.443	11.443	88	139	18	18	18	46	53
TOTALS	14.533	14.533	11.443	11.443	88	139	18	18	18	46	53

# SUMMARY

## DEPARTMENT OF DEFENSE IN-HOUSE R&D LABORATORIES

### PROGRAM DATA FOR FY 1983

	(MILLIONS)
TOTAL ANNUAL LABORATORY PROGRAM	7875.263
TOTAL INHOUSE PROGRAM	2959.262
TOTAL RDT&E PROGRAM	4949.923
TOTAL INHOUSE RDT&E	2525.811
TOTAL ANNUAL OPERATING COST	831.547

### PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHD	TOTAL PROFESSIONALS
MILITARY	7287	599	3336
CIVILIAN	47552	3647	24115
TOTAL	54839	4246	27451

### PHYSICAL FACILITIES (END OF FY 1983)

ACRES	1231043
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#### SPACE (THOUSANDS OF SQ FT)

LABORATORY	23730.864
ADMINISTRATIVE	4531.985
OTHER	14230.522
TOTAL	42493.371

#### COST (MILLIONS)

REAL PROPERTY	1791.680
EQUIPMENT	2154.714
TOTAL	3946.394

TABLE 1A. ARMY R&amp;D LABORATORIES, PROGRAM AND PERSONNEL DATA, FY 1963

INSTALLATION	FUNDING DATA (MILLIONS \$)				PERSONNEL DATA									
	TOTAL FUNDING	TOTAL RDT&E	INHOUSE	TOTAL	TOTAL MIL	TOTAL CIV	PHD	PHD MIL	PHD CIV	PROF	PROF MIL	PROF CIV	PRCF	PRCF CIV
AEROMEDICAL RESEARCH LABORATORY	9.947	7.701	6.612	7.701	79	78	16	6	30	19				
ATMOSPHERIC SCIENCES LABORATORY	31.223	20.508	17.573	20.508	181	341	0	29	3	110				
AVIATION RESEARCH & TECHNOLOGY LABORATORIES	86.204	80.413	27.573	80.413	16	359	1	27	13	258				
AVIONICS R & D ACTIVITY	34.844	20.851	5.250	20.851	17	261	0	6	11	162				
BALLISTIC RESEARCH LABORATORY	69.553	54.737	44.503	54.737	25	691	0	111	6	414				
BELVOIR R & D CENTER	306.159	49.854	39.399	49.854	71	1178	1	27	66	399				
CHEMICAL R&D CENTER	130.210	79.665	57.920	79.665	95	903	6	71	39	596				
COLD REGIONS R&E LABORATORY	19.630	14.280	6.968	14.280	15	263	0	34	3	125				
COMBAT SURVEILLANCE & TGT ACQUISITION LAB	37.971	24.344	7.816	24.344	12	167	0	3	8	98				
COMMUNICATIONS - ELECTRONICS R & D CENTER	151.451	47.690	35.908	47.690	73	551	0	14	22	362				
CONSTRUCTION ENGINEERING RESEARCH LAB	23.998	15.631	12.506	15.631	11	208	0	29	11	141				
ELECTRONIC WARFARE LABORATORY	170.437	31.049	22.855	31.049	84	403	1	6	75	206				
ELECTRONICS TECHNOLOGY AND DEVICES LAB	74.685	19.962	17.682	19.962	1	291	0	42	1	184				
ENGINEER TOPOGRAPHIC LABORATORIES	45.883	12.900	10.983	12.900	14	286	1	13	8	169				
ENGINEER MATERIAIS EXPERIMENT STATION	91.750	77.073	25.647	77.073	23	1538	1	101	23	590				
FIRE CONTROL & SMALL CAL. WPNS SYSTS LAB	104.091	83.676	27.812	83.676	14	650	0	28	14	415				
HARRY DIAMOND LABORATORIES	134.185	62.486	37.426	62.486	6	1169	0	48	6	362				
HUMAN ENGINEERING LABORATORY	18.729	14.378	10.998	14.378	35	179	1	18	10	117				
INSTITUTE OF DENTAL RESEARCH	4.479	3.735	1.782	3.735	22	21	1	2	24	11				
INSTITUTE OF SURGICAL RESEARCH	8.592	7.834	3.386	7.834	157	79	16	4	46	31				
LARGE CALIBER WEAPONS SYSTEMS LAB	187.453	123.167	66.974	123.167	27	1734	1	82	19	1050				
LETTERMAN ARMY INSTITUTE OF RESEARCH	16.521	13.065	8.786	13.065	158	117	33	14	97	51				
MATERIALS AND MECHANICS RESEARCH CENTER	46.445	24.495	19.693	24.495	16	610	1	73	19	238				
METALLURGICAL RESEARCH CENTER	17.090	15.992	5.578	15.992	33	103	2	17	25	47				
MEDICAL R & D COMMAND	15.164	14.362	11.316	14.362	61	140	29	1	55	2				
MEDICAL RESEARCH INSTITUTE CHEMICAL DEFENSE	37.818	35.239	14.426	35.239	85	159	33	22	47	69				
MEDICAL RSCH INST OF INFECTIOUS DISEASES	23.081	27.916	16.433	27.916	305	205	46	41	104	92				
MISSILE LABORATORY	258.488	177.053	69.028	177.053	45	1170	4	70	31	776				
NATICK R & D CENTER	67.733	55.417	36.059	55.417	105	1092	3	77	40	391				
NIGHT VISION & ELECTRO OPTICS LABORATORY	172.289	32.034	25.614	32.034	32	470	0	30	6	216				
RESEARCH INST FOR BEHAVIORAL & SOCIAL SCI	50.239	39.892	17.537	39.892	31	374	0	166	30	271				
RSCH INSTITUTE OF ENVIRONMENTAL MEDICINE	7.145	5.516	4.879	5.516	77	97	6	18	39	59				
SIGNALS WARFARE LABORATORY	105.954	8.495	5.739	8.495	51	180	0	5	10	93				
TANK-AUTO COMMAND R & D CENTER	697.659	35.282	24.194	35.282	36	554	0	14	21	218				
WALTER REED ARMY INSTITUTE OF RESEARCH	67.280	48.344	34.126	48.344	411	598	82	59	386	278				
TOTALS	3343.825	1199.756	781.706	1199.756	2404	17219	285	1322	1350	8620				

TABLE 24. ARMY R&amp;D FACILITIES DATA, FY 1963

INSTALLATION	SPACE AND PROPERTY				COST (MILLIONS \$)	
	SPACE (THOUSANDS OF SQUARE FEET)				REAL PROPERTY	EQUIPMENT
	ACRES	LABORATORY	ADMIN	OTHER		
AEROMEDICAL RESEARCH LABORATORY	54	98,255	20,000	18,351	7,612	12,285
ATMOSPHERIC SCIENCES LABORATORY	15	49,467	26,663	7,477	7,477	23,757
AVIATION RESEARCH & TECHNOLOGY LABORATORIES	127	88,848	58,673	16,370	2,272	17,001
AVIONICS R & D ACTIVITY	0	52,450	13,140	19,100	0,000	10,781
BALLISTIC RESEARCH LABORATORY	1920	511,780	11,200	40,982	15,426	47,949
BELVOIR R & D CENTER	1052	353,082	186,816	268,237	18,871	37,028
CHEMICAL R&D CENTER	1750	434,009	211,091	549,086	21,815	32,656
COLD REGIONS RIE LABORATORY	20	80,787	30,027	133,024	8,835	9,618
COMBAT SURVEILLANCE & TGT ACQUISITION LAB	35	52,324	6,139	10,589	0,600	7,050
COMMUNICATIONS - ELECTRONICS R & D CENTER	0	59,031	79,011	11,200	0,000	22,500
CONSTRUCTION ENGINEERING RESEARCH LAB	30	56,785	34,750	20,019	6,500	6,000
ELECTRONIC WARFARE LABORATORY	325	163,677	26,617	37,314	6,078	55,580
ELECTRONICS TECHNOLOGY AND DEVICES LAB	0	81,909	5,537	4,467	0,000	14,000
ENGINEER TOPOGRAPHIC LABORATORIES	33	90,722	7,000	13,300	6,000	12,448
ENGINEER WATERWAYS EXPERIMENT STATION	951	1739,308	334,925	168,824	31,259	44,996
FIRE CONTROL & SMALL CAL. WPNS SYSTS LAB	6	167,247	103,974	4,476	8,305	26,060
HARRY DIAMOND LABORATORIES	2316	507,829	112,019	1148,840	53,557	46,754
HURLIN ENGINEERING LABORATORY	72	111,524	7,056	21,400	8,112	8,507
INSTITUTE OF DENTAL RESEARCH	4	9,852	5,696	14,153	2,568	2,702
INSTITUTE OF SURGICAL RESEARCH	1	26,424	1,800	22,400	4,300	4,300
LARGE CALIBER WEAPONS SYSTEMS LAB	11	189,951	219,627	50,343	17,732	27,272
LETTERMAN ARMY INSTITUTE OF RESEARCH	9	83,520	62,091	274,940	34,514	10,556
MATERIALS AND MECHANICS RESEARCH CENTER	37	352,000	88,261	48,375	15,294	21,919
MEDICAL BIOENGINEERING R&D LABORATORY	5	45,193	27,300	34,108	3,568	3,549
MEDICAL R & D COMMAND	1	0,000	38,757	0,000	0,632	0,997
MEDICAL RESEARCH INSTITUTE CHEMICAL DEFENSE	31	36,426	15,345	98,429	9,246	6,160
MEDICAL RSCH INST OF INFECTIOUS DISEASES	43	104,136	20,718	209,699	18,763	11,000
MISSILE LABORATORY	11000	664,000	224,000	252,000	96,400	98,000
NATICK R & D CENTER	24	527,067	55,340	277,817	28,497	22,850
NIGHT VISION & ELECTRO OPTICS LABORATORY	38	180,639	27,186	20,000	32,000	31,237
RESEARCH INST FOR BEHAVIORAL & SOCIAL SCI	0	3,008	51,310	3,191	0,550	0,700
RSCH INSTITUTE OF ENVIRONMENTAL MEDICINE	4	60,421	18,793	28,647	4,084	6,704
SIGNALS WARFARE LABORATORY	10	2,986	29,145	6,963	3,500	5,800
TAN: -AUTO COMMAND R & D CENTER	11	257,152	33,284	111,777	37,600	117,445
WALTER REED ARMY INSTITUTE OF RESEARCH	203	383,274	58,600	0,000	10,000	20,500
TOTALS	20138	7626,283	2251,891	4024,179	524,167	818,661



TABLE 3A. NAVY R&amp;D LABORATORIES, PROGRAM AND PERSONNEL DATA, FY 1983

INSTALLATION	FUNDING DATA (MILLIONS \$)				PERSONNEL DATA									
	TOTAL INHOUSE	TOTAL RDT&E	INHOUSE RDT&E	TOTAL MIL	TOTAL CIV	PHD MIL	PHD CIV	PHC MIL	PHC CIV	PROF MIL	PROF CIV			
AEROSPACE MEDICAL RESEARCH LABORATORY	4,368	3,683	3,490	37	55	10	10	14	23					
AIR DEVELOPMENT CENTER	318,349	171,072	80,647	254	2225	5	43	63	1305					
BIODYNAMICS LABORATORY	4,741	3,885	3,158	34	51	3	6	7	27					
BIOSCIENCES LABORATORY	3,209	2,900	2,900	9	6	4	0	5	0					
CIVIL ENGINEERING LABORATORY	39,058	32,741	17,047	16	345	0	27	7	153					
CLOTHING & TEXTILE RESEARCH FACILITY	3,964	2,655	2,355	1	56	0	1	1	36					
COASTAL SYSTEMS CENTER	80,727	45,215	24,846	116	647	0	27	13	364					
DAVID W. TAYLOR SHIP R&D CENTER	225,056	164,647	87,503	76	2478	1	118	23	1206					
DENTAL RESEARCH INSTITUTE	1,733	0,874	0,839	29	15	8	4	13	6					
ENVIRONMENTAL PREDICTION RESEARCH FACILITY	6,276	5,177	2,265	14	32	2	8	5	27					
HEALTH RESEARCH CENTER	4,244	3,239	2,558	30	60	11	10	14	24					
MEDICAL RESEARCH INSTITUTE	20,521	15,149	14,088	245	171	62	41	78	86					
MEDICAL RESEARCH UNIT NO.2	3,111	2,221	2,221	31	58	4	2	20	9					
MEDICAL RESEARCH UNIT NO.3	4,718	3,885	3,685	29	202	12	17	13	41					
OCEAN R & D ACTIVITY	48,398	46,252	18,341	16	312	1	76	11	201					
OCEAN SYSTEMS CENTER	391,500	243,232	121,043	269	2582	2	181	49	1382					
PERSONNEL RESEARCH & DEVELOPMENT CENTER	23,608	17,604	11,696	34	293	4	81	17	208					
RESEARCH LABORATORY	341,049	302,650	163,130	137	3090	2	664	40	1505					
SUBMARINE MEDICAL RESEARCH LABORATORY	2,994	1,995	1,995	36	55	8	10	14	24					
SURFACE WEAPONS CENTER	507,924	279,827	127,319	103	5089	0	241	35	2307					
UNDERSEA RANGES DEPARTMENT	50,554	37,259	8,829	41	22	0	2	9	13					
UNDERWATER SYSTEMS CENTER	385,854	174,225	94,084	79	2892	0	86	30	1640					
WEAPONS CENTER	459,324	245,008	173,281	570	4152	0	131	38	1602					
TOTALS	2931,300	1805,324	967,240	2206	24888	139	1786	519	12189					

TABLE 4A. NAVY R&amp;D FACILITIES DATA, FY 1983

INSTALLATION	SPACE AND PROPERTY				COST (MILLIONS \$)	
	ACRES	LABORATORY	ADMIN	OTHER	REAL PROPERTY	EQUIPMENT
AEROSPACE MEDICAL RESEARCH LABORATORY	7	111.293	6.796	8.052	3.130	4.191
AIR DEVELOPMENT CENTER	840	852.000	83.000	654.000	37.900	52.000
BIODYNAMICS LABORATORY	1	35.702	24.452	0.000	2.070	0.279
BIOSCIENCES LABORATORY	5	77.625	8.731	34.646	1.000	5.521
CIVIL ENGINEERING LABORATORY	32	112.965	77.463	16.493	7.300	4.853
CLOTHING & TEXTILE RESEARCH FACILITY	1	9.160	10.000	3.600	0.865	0.746
COASTAL SYSTEMS CENTER	648	342.248	47.291	363.488	47.942	22.481
DAVID M. TAYLOR SHIP R&D CENTER	325	1705.165	99.405	328.172	73.770	88.446
DENTAL RESEARCH INSTITUTE	1	21.264	6.001	9.318	0.000	1.032
ENVIRONMENTAL PREDICTION RESEARCH FACILITY	0	5.446	14.040	5.098	0.000	1.355
HEALTH RESEARCH CENTER	1	19.052	7.159	0.000	0.147	1.527
MEDICAL RESEARCH INSTITUTE	4	159.933	11.720	47.210	7.059	12.673
MEDICAL RESEARCH UNIT NO. 2	1	5.550	3.510	4.202	0.630	0.253
MEDICAL RESEARCH UNIT NO. 3	5	89.472	8.962	61.072	9.054	1.020
OCEAN R & D ACTIVITY	5	51.002	23.881	83.069	10.048	11.000
OCEAN SYSTEMS CENTER	2719	1280.660	201.210	210.070	53.504	64.599
PERSONNEL RESEARCH & DEVELOPMENT CENTER	1	64.492	7.137	5.280	0.545	7.840
RESEARCH LABORATORY	1072	2348.281	192.677	481.382	98.500	118.917
SEAFARINE MEDICAL RESEARCH LABORATORY	1	40.514	14.099	0.000	1.315	1.889
SURFACE WEAPONS CENTER	5347	1656.078	180.751	1306.003	105.975	150.289
UNDERSEA RANGES DEPARTMENT	1042	82.178	12.464	331.127	26.938	1.507
UNDERWATER SYSTEMS CENTER	381	1077.751	260.348	498.049	54.651	65.500
WEAPONS CENTER	1127117	1746.309	263.692	4192.824	233.143	114.368
TOTALS	1139556	11894.140	1564.789	8643.155	774.856	732.286

TABLE 5A. AIR FORCE R&amp;D LABORATORIES, PROGRAM AND PERSONNEL DATA, FY 1983

INSTALLATION	FUNDING DATA (MILLIONS \$)				PERSONNEL DATA									
	TOTAL	INHOUSE	TOTAL RD&E	INHOUSE RD&E	TOTAL		TOTAL		TOTAL		TOTAL		TOTAL	
					MIL	CIV	MIL	CIV	MIL	CIV	MIL	CIV	MIL	CIV
AERO PROPULSION LABORATORY	119.123	7.910	117.755	6.542	45	339	3	27	39	218	3	27	39	218
AEROSPACE MEDICAL RESEARCH LABORATORY	32.160	18.556	30.557	16.953	137	152	27	27	65	103	27	27	65	103
ARMAMENT LABORATORY	74.239	30.624	68.571	29.338	165	348	4	15	153	246	4	15	153	246
AVIONICS LABORATORY	247.932	23.540	242.941	18.699	154	603	5	37	120	404	5	37	120	404
ENGINEERING & SERVICES CNTR / RO	18.986	4.158	16.230	1.610	82	19	6	2	45	12	6	2	45	12
FLIGHT DYNAMICS LABORATORY	165.57	11.762	160.693	6.883	183	648	2	34	135	432	2	34	135	432
FRANK J SEILER RESEARCH LABORATORY	2.075	2.075	1.167	1.167	23	9	9	1	17	5	9	1	17	5
GEOPHYSICS LABORATORY	82.141	33.087	78.407	29.637	122	488	3	98	39	304	3	98	39	304
HUMAN RESOURCES LABORATORY	53.956	14.192	48.156	11.330	134	240	11	47	75	145	11	47	75	145
MATERIALS LABORATORY	144.818	5.964	83.472	6.118	49	312	3	58	44	237	3	58	44	237
ROCKET PROPULSION LABORATORY	48.649	18.603	44.605	14.559	174	252	1	17	67	108	1	17	67	108
ROME A&D DEVELOPMENT CENTER	323.408	37.485	248.182	31.865	224	1108	5	62	114	629	5	62	114	629
SCHOOL OF AEROSPACE MEDICINE	30.223	21.018	23.301	14.096	368	265	48	39	81	102	48	39	81	102
WEAPONS LABORATORY	242.223	95.944	224.824	78.545	649	523	30	57	427	308	30	57	427	308
TOTALS	1585.605	324.938	1388.861	265.342	2509	5306	157	521	1421	3253	157	521	1421	3253

TABLE 6A. AIR FORCE R&amp;D FACILITIES DATA, FY 1983

INSTALLATION	SPACE AND PROPERTY				COST (MILLIONS \$)	
	ACRES	LABORATORY	ADMIN	OTHER	REAL PROPERTY	EQUIPMENT
AERO PROPULSION LABORATORY	44	266.165	47.779	23.889	79.080	34.760
AEROSPACE MEDICAL RESEARCH LABORATORY	30	1.257	105.887	105.887	11.082	27.047
ARMAMENT LABORATORY	0	0.000	0.000	0.000	0.000	0.000
AVIONICS LABORATORY	220	229.369	9.483	405.264	45.602	99.989
ENGINEERING & SERVICES CNTR / RD	3	12.000	14.000	0.000	1.960	2.656
FLIGHT DYNAMICS LABORATORY	76	546.654	5.100	168.182	50.676	42.043
FRANK J SEILER RESEARCH LABORATORY	0	190.000	3.000	0.000	1.820	2.628
GEOPHYSICS LABORATORY	336	393.389	14.821	25.883	9.871	35.279
HUMAN RESOURCES LABORATORY	5	81.180	58.219	56.132	6.521	75.215
MATERIALS LABORATORY	15	188.750	117.941	54.123	23.340	66.433
RCKET PROPULSION LABORATORY	68345	419.046	86.848	4.780	126.000	27.180
ROME AIR DEVELOPMENT CENTER	1517	764.945	52.839	182.271	29.595	56.243
SCHOOL OF AEROSPACE MEDICINE	46	436.163	53.341	198.237	18.120	24.556
WEAPONS LABORATORY	792	655.000	130.000	182.000	75.595	93.530
TOTALS	71339	4183.918	699.258	1506.646	479.242	587.559

TABLE 7A. DEPARTMENT OF DEFENSE R&D FACILITIES DATA, FY 1983

INSTALLATION	ACRES	SPACE AND PROPERTY SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLIONS \$)	
		LABORATORY	ADMIN	OTHER	REAL PROPERTY	EQUIPMENT
ARMED FORCES RADIOBIOLOGY RSCH. INSTITUTE	10	26.523	16.047	56.540	13.415	16.208
BETHESDA: ID.						
TOTALS	10	26.523	16.047	56.540	13.415	16.208

TABLE 8 - ARMY RESEARCH AND DEVELOPMENT LABORATORY ORGANIZATIONAL RELATIONSHIPS

	INTERMEDIATE	COMMAND CHAIN	COMMAND
AEROMEDICAL RESEARCH LABORATORY	MEDICAL R&D COMMAND	THE SURGEON GENERAL	THE SURGEON GENERAL
ATMOSPHERIC SCIENCES LABORATORY	ELECTRONICS R&D CMD	MAT DEV & READ CMD	MAT DEV & READ CMD
AVIATION R&T LABORATORIES	AVIATION R&D COMMAND	MAT DEV & READ CMD	MAT DEV & READ CMD
AVIONICS R&D ACTIVITY	AVIATION R&D COMMAND	MAT DEV & READ CMD	MAT DEV & READ CMD
BALLISTIC RESEARCH LABORATORY	ARMAMENT R&D COMMAND	MAT DEV & READ CMD	MAT DEV & READ CMD
BELVOIR RESEARCH AND DEVELOPMENT CENTER	ARMAMENT R&D COMMAND	MAT DEV & READ CMD	MAT DEV & READ CMD
CHEMICAL RESEARCH AND DEVELOPMENT CENTER	ARMAMENT R&D COMMAND	MAT DEV & READ CMD	MAT DEV & READ CMD
COLD REGIONS R&E LABORATORY	ARMAMENT R&D COMMAND	MAT DEV & READ CMD	MAT DEV & READ CMD
COMBAT SURVEILLANCE & TARGET ACQUISITION LABS	ELECTRONICS R&D COMMAND	CHIEF OF ENGINEERS	CHIEF OF ENGINEERS
COMMUNICATIONS-ELECTRONICS R&D CENTER	COMMUNICATIONS-ELECTRONICS COMMAND	MAT DEV & READ CMD	MAT DEV & READ CMD
CONSTRUCTION ENGINEERING RSCH LABORATORY	---	CHIEF OF ENGINEERS	CHIEF OF ENGINEERS
ELECTRONIC WARFARE LABORATORY	ELECTRONICS R&D COMMAND	MAT DEV & READ CMD	MAT DEV & READ CMD
ELECTRONICS TECHNOLOGY & DEVICES LABORATORY	ELECTRONICS R&D COMMAND	MAT DEV & READ CMD	MAT DEV & READ CMD
ENGINEER TOPOGRAPHIC LABORATORIES	---	CHIEF OF ENGINEERS	CHIEF OF ENGINEERS
ENGINEER WATERWAYS EXPERIMENT STATION	---	MAT DEV & READ CMD	MAT DEV & READ CMD
FIRE CONTROL & SMALL CALIBER WEPS SYSTEMS LAB	ARMAMENT R&D COMMAND	MAT DEV & READ CMD	MAT DEV & READ CMD
HARRY DIAMOND LABORATORIES	ELECTRONICS R&D COMMAND	MAT DEV & READ CMD	MAT DEV & READ CMD
HUMAN ENGINEERING LABORATORY	---	MAT DEV & READ CMD	MAT DEV & READ CMD
INSTITUTE OF DENTAL RESEARCH	MEDICAL R&D COMMAND	THE SURGEON GENERAL	THE SURGEON GENERAL
INSTITUTE OF SURGICAL RESEARCH	MEDICAL R&D COMMAND	THE SURGEON GENERAL	THE SURGEON GENERAL
LARGE CALIBER WEAPONS SYSTEMS LABORATORY	ARMAMENT R&D COMMAND	MAT DEV & READ CMD	MAT DEV & READ CMD
LETTERMAN ARMY INSTITUTE OF RESEARCH	MEDICAL R&D COMMAND	THE SURGEON GENERAL	THE SURGEON GENERAL
MATERIALS AND MECHANICS RESEARCH CENTER	---	MAT DEV & READ CMD	MAT DEV & READ CMD
MEDICAL BIOENGINEERING R&D LABORATORY	MEDICAL R&D COMMAND	THE SURGEON GENERAL	THE SURGEON GENERAL
MEDICAL R&D COMMAND	---	THE SURGEON GENERAL	THE SURGEON GENERAL
MEDICAL RESEARCH INSTITUTE OF CHEMICAL DEFENSE	MEDICAL R&D COMMAND	THE SURGEON GENERAL	THE SURGEON GENERAL
MEDICAL RESEARCH INST OF INFECTIOUS DISEASES	MEDICAL R&D COMMAND	THE SURGEON GENERAL	THE SURGEON GENERAL
MISSILE LABORATORY	MISSILE COMMAND	MAT DEV & READ CMD	MAT DEV & READ CMD
NATICK R&D CENTER	---	MAT DEV & READ CMD	MAT DEV & READ CMD
NIGHT VISION & ELECTRO-OPTICS LABORATORY	ELECTRONICS R&D COMMAND	MAT DEV & READ CMD	MAT DEV & READ CMD

TABLE 8 - ARMY RESEARCH AND DEVELOPMENT LABORATORY ORGANIZATIONAL RELATIONSHIPS

<u>COMMAND CHAIN</u>	
<u>INTERMEDIATE</u>	<u>COMMAND</u>
—	DEPUTY CHIEF OF STAFF FOR PERSONNEL
RESEARCH INSTITUTE OF ENVIRONMENTAL MEDICINE	THE SURGEON GENERAL
SIGNALS WARFARE LABORATORY	MAT DEV & READ CMD
TANK-AUTOMOTIVE COMMAND R&D CENTER	MAT DEV & READ CMD
WALTER REED ARMY INSTITUTE OF RESEARCH	THE SURGEON GENERAL

TABLE 9 - NAVY RESEARCH AND DEVELOPMENT LABORATORY ORGANIZATIONAL RELATIONSHIPS

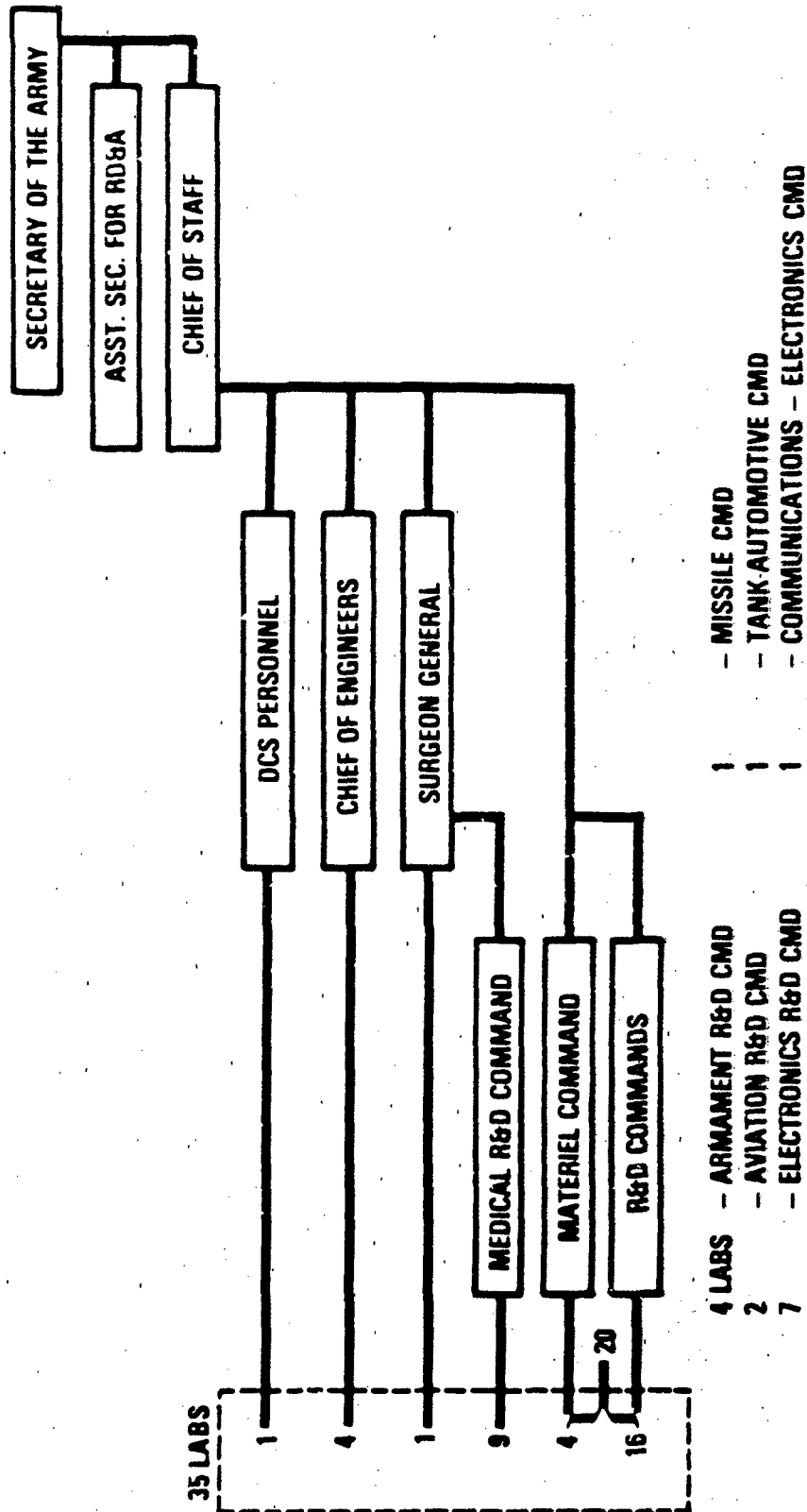
	COMMAND CHAIN		
	INTERMEDIATE		COMMAND
AEROSPACE MEDICAL RESEARCH LABORATORY	MEDICAL R&D COMMAND	DIRECTOR	NAVAL MEDICINE
AIR DEVELOPMENT CENTER	—	CHIEF OF	NAVAL MATERIAL
BIODYNAMICS LABORATORY	MEDICAL R&D COMMAND	DIRECTOR	NAVAL MEDICINE
BIOSCIENCES LABORATORY	—	CHIEF OF	NAVAL RESEARCH
CIVIL ENGINEERING LABORATORY	NAVAL FAC ENG COMMAND	CHIEF OF	NAVAL MATERIAL
CLOTHING AND TEXTILE RESEARCH FACILITY	NAVAL SU. PLY SYS COMMAND	CHIEF OF	NAVAL MATERIAL
COASTAL SYSTEMS CENTER	—	CHIEF OF	NAVAL MATERIAL
DAVID W. TAYLOR SHIP R&D CENTER	—	CHIEF OF	NAVAL MATERIAL
DEITAL RESEARCH INSTITUTE	—	DIRECTOR	NAVAL MEDICINE
ENVIRONMENTAL PREDICTION RESEARCH FACILITY	MEDICAL R&D COMMAND	CHIEF OF	NAVAL MATERIAL
HEALTH RESEARCH CENTER	NAVAL AIR SYSTEMS COMMAND	DIRECTOR	NAVAL MEDICINE
MEDICAL RESEARCH INSTITUTE	MEDICAL R&D COMMAND	DIRECTOR	NAVAL MEDICINE
MEDICAL RESEARCH UNIT NO. 2	MEDICAL R&D COMMAND	DIRECTOR	NAVAL MEDICINE
MEDICAL RESEARCH UNIT NO. 3	MEDICAL R&D COMMAND	DIRECTOR	NAVAL MEDICINE
OCEAN R&D ACTIVITY	—	CHIEF OF	NAVAL RESEARCH
OCEAN SYSTEMS CENTER	—	CHIEF OF	NAVAL MATERIAL
PERSONNEL RESEARCH & DEVELOPMENT CENTER	—	CHIEF OF	NAVAL MATERIAL
RESEARCH LABORATORY	—	CHIEF OF	NAVAL RESEARCH
SUBMARINE MEDICAL RESEARCH LABORATORY	MEDICAL R&D COMMAND	DIRECTOR	NAVAL MEDICINE
SURFACE WEAPONS CENTER	—	CHIEF OF	NAVAL MATERIAL
UNDERSEAS RANGES DEPARTMENT	—	CHIEF OF	NAVAL MATERIAL
UNDERWATER SYSTEMS CENTER	—	CHIEF OF	NAVAL MATERIAL
WEAPONS CENTER	—	CHIEF OF	NAVAL MATERIAL



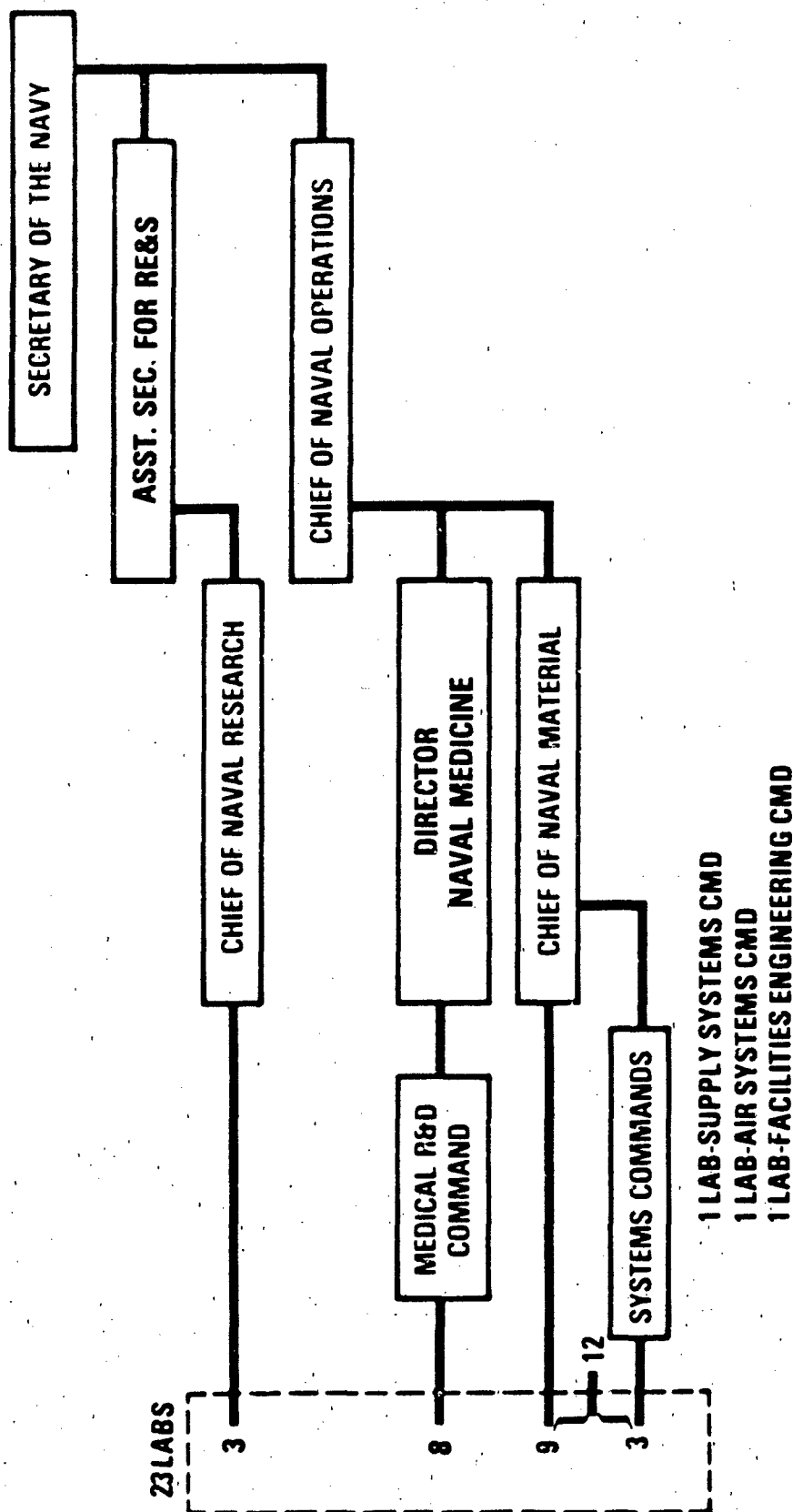
TABLE 10 AIR FORCE RESEARCH AND DEVELOPMENT LABORATORY ORGANIZATIONAL RELATIONSHIPS

<u>COMMAND CHAIN</u>		
	<u>INTERMEDIATE</u>	<u>COMMAND</u>
AEROPROPULSION LABORATORY	WRIGHT AERONAUTICAL LABS	AF SYSTEMS COMMAND
AEROSPACE MEDICAL RESEARCH LABORATORY	AEROSPACE MEDICAL DIVISION	AF SYSTEMS COMMAND
ARMAMENT LABORATORY	ARMAMENT DIVISION	AF SYSTEMS COMMAND
AVIONICS LABORATORY	WRIGHT AERONAUTICAL LABS	AF SYSTEMS COMMAND
ENGINEERING SERVICES CENTER/RD	—	HQ US AIR FORCE
FLIGHT DYNAMICS LABORATORY	WRIGHT AERONAUTICAL LABS	AF SYSTEMS COMMAND
FRANK J. SEILER RESEARCH LABORATORY	OFFICE OF SCIENTIFIC RES	AF SYSTEMS COMMAND
GEOPHYSICS LABORATORY	—	AF SYSTEMS COMMAND
HUMAN RESOURCES LABORATORY	—	AF SYSTEMS COMMAND
MATERIALS LABORATORY	WRIGHT AERONAUTICAL LABS	AF SYSTEMS COMMAND
ROCKET PROPULSION LABORATORY	—	AF SYSTEMS COMMAND
ROME AIR DEVELOPMENT CENTER	ELECTRONIC SYSTEMS DIVISION	AF SYSTEMS COMMAND
SCHOOL OF AEROSPACE MEDICINE	AEROSPACE MEDICAL DIVISION	AF SYSTEMS COMMAND
WEAPONS LABORATORY	—	AF SYSTEMS COMMAND

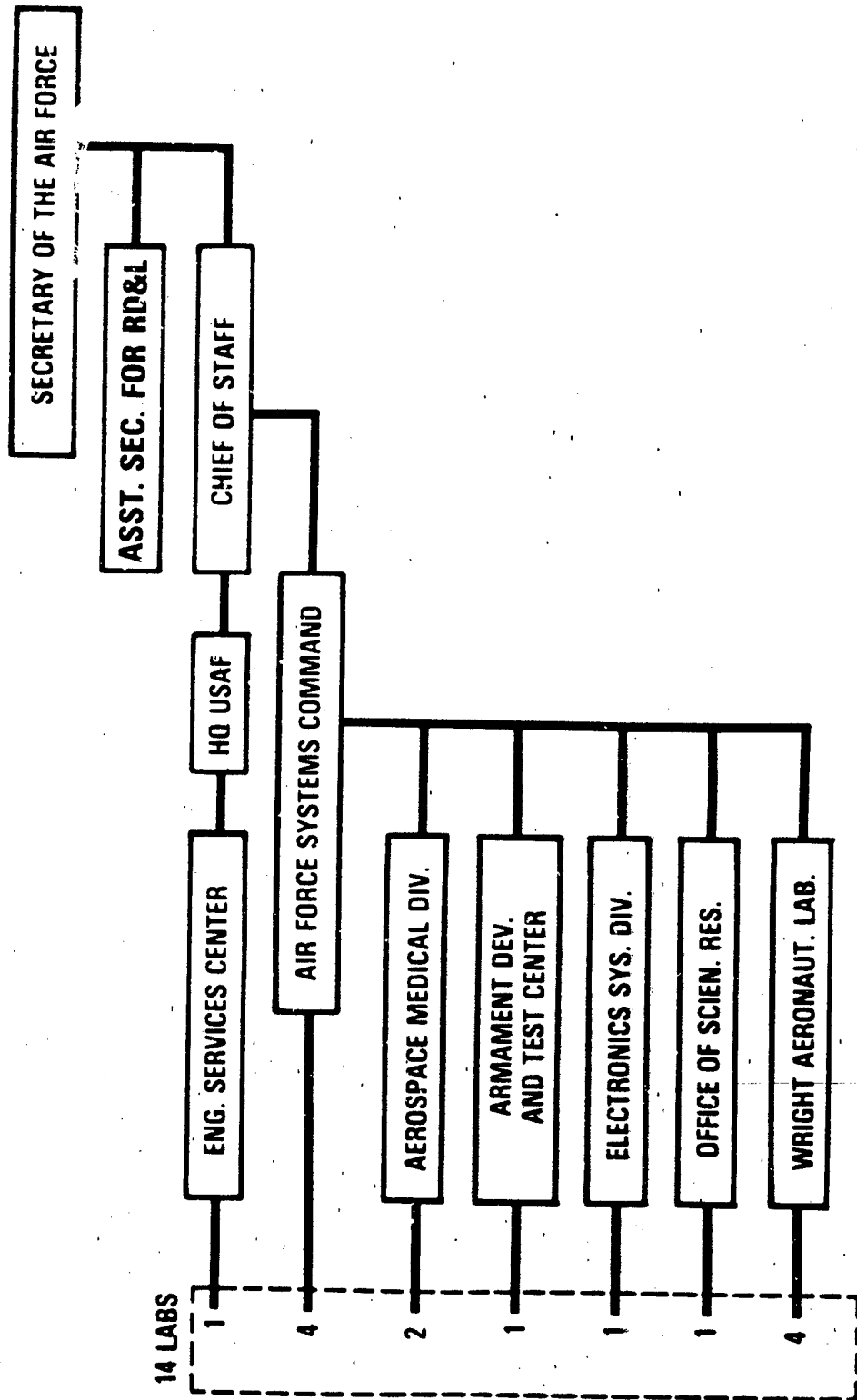
# ARMY LABORATORIES COMMAND CHAIN



# NAVY LABORATORIES COMMAND CHAIN



# AIR FORCE LABORATORIES COMMAND CHAIN



INSTALLATION: AEROMEDICAL RESEARCH LABORATORY

FT. RUCKER, AL.

CDR COL DUDLEY R. PRICE

DEP CDR LTC J.D. LAMOTHE

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	7.701	8.244
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.004	0.004
TOTAL OTHER	2.242	2.202
TOTAL ANNUAL LAB	9.947	10.450
TOTAL INHOUSE	8.858	9.507
TOTAL INHOUSE RDT&E	6.612	7.301
ANNUAL OPERATING COST	3.118	3.005

PERSONNEL	PERSONNEL DATA (END OF FY 1983)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	79	16	30	49
CIVILIAN	78	8	19	59
TOTAL	157	24	49	108

ACRES	SPACE AND PROPERTY				COST (MILLION \$)	
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
54	98.255	20.000	18.351	136.606	7.612	12.285

#### ...MISSION

CONDUCTS LIFE SCIENCES RSCH INTO AVIATION, COMBAT VEH, & COMBAT WEAPONS  
SYS ENV & THEIR EFF ON CREWMEMBERS HLTH, SAFETY & PERF. DATA BASES AC-  
QUIRED THRU FLD & LAB RSCH. INSTITUTES IN RSCH ON THE BIOEFFECTS OF LASER  
SYS, DEF AGST CML AGTS, OPNS USED TO IMPROVE MEANS OF PATIENT EVACUATION.

#### ...CURRENT IMPORTANT PROGRAMS

EFFECTS OF NERVE AGENT ANTIDOTES ON THE VISUAL SYSTEM  
INDIVIDUAL AND CREW EFFICIENCY ENHANCEMENT  
AUDITORY EFFECTS OF BLAST OVERPRESSURE  
VIBRATION HAZARDS OF COMBAT AIRCRAFT AND VEHICLES  
BIOEFFECTS OF COMBAT MATERIEL AND OPERATIONS

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

MULTI AXIS VIBRATION SYS, HELICOPTER INFLIGHT MONITORING SYSTEM W/INSTRU-  
MENTED RANGE, ANECHOIC & REVERBERATION CHAMBERS, MOBILE ACCOUSTICS LAB,  
AIRCRAFT MODIFIED FOR INFLIGHT MED RSCH, VIVARIUM, SINGLE AXIS VIBRATION  
SYS, DATA ACQUISITION & BIOTELEMETRY SYS, ELECTRON & LIGHT MICROSCOPY LAB  
FIELD RSCH FACILITY, ANALOGUE & DIGITAL COMPUTER SYS, IMPACT FACILITY,  
SCIENTIFIC & MED RSCH INFORMATION CENTER, SPECTROGRAPHIC ANALYSIS SYS,  
CARDIOPULMONARY LAB, BIO OPTICAL TESTING LAB, VISUAL NEUROPHYSIOLOGY LAB  
OPTICAL FABRICATION LAB, SHOCK TUBE, ELECTRO OPTICAL TESTING LAB, HIGH  
PRESSURE LIQUID CHROMOTOGRAPHY

INSTALLATION: AIR DEFENSE BOARD

EL PASO, TX.

PRES. COL. RUSSELL M. MCGRAW

TECH. ADV. MR. CHARLES E. FRENCH

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	4.825	5.373
TOTAL PROCUREMENT	1.122	0.498
TOTAL O&M	1.901	0.996
TOTAL OTHER	8.438	4.168
TOTAL ANNUAL LAB	10.786	11.035
TOTAL INHOUSE	7.808	8.885
TOTAL INHOUSE RDT&E	3.684	4.630
ANNUAL OPERATING COST	0.653	0.737

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	102	0	6	96
CIVILIAN	88	0	12	76
TOTAL	190	0	18	172

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
0	29.172	37.090	19.132	85.394	1.189	14.781

...MISSION

PLAN, CONDUCT AND REPT ON OPERATIONAL AND OTHER USER TESTS. PARTICIPATE IN OTHER TESTING AS DIR. PROV ADVICE AND GUIDN ON TEST MATTERS TO COMBAT TRAINING, AND MAT DEVELOPERS, OTHER SERVICES AND PRIVATE INDUSTRY. CONDUCT OTHER TESTS AND SELECTED SPECIFIC EVAL AS DIR BY CG TRADOC.

...CURRENT IMPORTANT PROGRAMS

BFV-FOT  
PIVADS  
SGT YORK (DVT)  
SGT YORK IPT  
SHORAD C2.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

EQUIPMENT: MULTIPLE TGT TRACKING SYS PROVIDES DATA FROM AIR AND GROUND TGTS, TWO LASER TRACKING SYS PROVIDE DATA FROM COOPERATIVE TGTS; INSTR WITH RADAR DATA RECORDER; A RANGE TIMING SYS TO PROVIDE A TIME BASE FOR RADAR SYS THAT PROVIDES HIGH ACCURACY; ONE NIKE-HERC FIRE CON SYS USED FOR RANGE SAFETY; TECH PHOTO LAB FOR REQUIRED DATA; RICS PROVIDES NEAR REAL TIME DATA OUTPUTS. FACILITIES AT FT BLISS: BLDG 1656 HOUSES RICS; RANGE TIMING SYS; DATA REDUCTION SYS; ELECTRONICS CAL & FABRICATION LAB; ALL INSTR SYS; TWO DATA ACQ SYS ACCEPT 59 DIFFERENT SIGNALS, CCTV SYS MACHINE & CARPENTER SHOPS; MICROWAVE TERMINAL THAT PROVIDES DATA & COMMO LINK TO RANGES; BLDG 1658 - PHOTOGRAPHIC LAB; DONA ANA, MCGREGOR, NORTH MCGREGOR RANGES FOR FIRING FORWARD AREA WEAPONS AT AIR OR GROUND TGTS. SITE MONITOR FOR ELECTRONICS TESTING OF EQUIPMENT.

INSTALLATION: AIRBORNE BOARD

FT. BRAGG, N.C.

PRES. COL. WILLIAM R. FOLEY

ENG. ADV. MR. KENNETH L. MOORE

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	2.291	3.110
TOTAL PROCUREMENT	0.719	0.160
TOTAL O&M	1.837	1.040
TOTAL OTHER	2.307	2.834
TOTAL ANNUAL LAB	7.654	7.144
TOTAL INHOUSE	7.357	6.819
TOTAL INHOUSE RDT&E	1.994	2.785
ANNUAL OPERATING COST	1.529	2.255

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	110	0	17	93
CIVILIAN	39	0	6	33
TOTAL	149	0	23	126

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
27	3.978	3.914	39.390	47.282	0.970	7.920

...MISSION

THE MISSION OF THE ABN BD IS TO PLAN, CONDUCT AND REPORT ON OT I, II, & III FDTE AND OTHER USER-TYPE TESTS OF ABN EQUIP, PROCEDURES, & SYSTEMS; PARTICIPATE IN DT AS DIRECTED; PROVIDE ADVICE & GUIDANCE ON TEST & EVALUATION MATTERS; CONDUCT OTHER TESTS & EVALUATIONS AS DIRECTED.

...CURRENT IMPORTANT PROGRAMS

LOW ALTITUDE PARACHUTE EXTRACTION SYSTEM  
STANDARD AIRDROP OF SELECTED ITEMS OF EQUIPMENT  
EXTERNAL AIR TRANSPORTABILITY  
INTERNAL AIR TRANSPORTABILITY  
AIRBORNE/AIRMOBILE ENGINEER EQUIPMENT.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

FACILITIES INCLUDE: MAIN OFC BLDG, ABN HANGAR, INSTRUMENTATION/DESIGN INTERFACING SECTION, COMBINED SHOP, & ADP FACILITY. MAJOR EQUIPMENT INCLUDES: 4 LIGHTWEIGHT OPTICAL TRACKING SYSTEMS, 25-TON CRANE, 2 20-TON MOBILE CRANES, 5-TON WRECKER, 2 40,000 LB ACFT LOADER, 3 T-28B ACFT, 1 UH-1H HELICOPTER, VARIOUS TYPES OF STANDARD PARACHUTES, 9 GASOLINE GENERATORS, DIGITAL THEODOLITES, ELECTRONIC DIAGNOSTIC EQUIPMENT, VOLT-METERS, AMMETERS, SPECTRUM ANALYZERS, SOUND & VIBRATION ANALYZERS, TIME MARK GENERATORS, OSCILLOSCOPES, MULTIMETERS, RANDOM NOISE GENERATORS, POWER SUPPLIES, Q METERS, ATTENUATORS, GRAPHIC LEVEL RECORDERS, 16 MM CAMERAS, FILM ANALYZERS, PORTABLE VIDEO EQUIPMENT, VAN METER, ANALOG TAPE RECORDER, FREQUENCY COUNTERS, SOUND LEVEL CALIBRATORS, METER CALIBRATORS, MEGOHMMETER.

INSTALLATION: ARMOR AND ENGINEER BOARD

FT. KNOX, KY.

PRES. COL. CECIL L. SHRADER

SCI. ADV. MR. WARREN W. WELLS

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	6.377	10.005
TOTAL PROCUREMENT	1.057	3.110
TOTAL O&M	0.456	0.312
TOTAL OTHER	4.217	4.400
TOTAL ANNUAL LAB	12.107	17.827
TOTAL INHOUSE	12.107	17.827
TOTAL INHOUSE RDT&E	6.377	10.635
ANNUAL OPERATING COST	0.696	0.794

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	197	0	74	123
CIVILIAN	100	1	21	79
TOTAL	297	1	95	202

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
2	63.365	50.454	88.069	201.888	1.455	5.904

...MISSION

PLAN CONDUCT & REPORT: OTI, II, III, FDTE, CEP, PIP, & OTHER USER TESTS OF AR/ ENGR EQ. PARTICIPATE IN SPEC STUDY OF CML EQ. PROVIDE GUIDANCE/ADVICE TO DEVELOPERS, PRODUCERS & OTHER SVCS/PRIVATE INDUSTRY. PLAN/COORDINATE RPT ON PERFORMANCE TESTS OF TEST BED VEHICLES & ADVANCED TECHNOLOGIES.

...CURRENT IMPORTANT PROGRAMS

SURROGATE RESEARCH VEHICLE  
EVASIVE TARGETRY  
ADVANCED TECHNOLOGY RESEARCH  
ARMORED COMBAT EARTH MOVER  
INSTRUMENTATION DEVELOPMENT.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

VIDEO AUTOMATIC TARGET TRACKING SYS; SIMFIRE HIT-KILL INDICATOR; POSITION LOCATION SYS; WIRE GUIDED EVASIVE TARGET SYS; TANK VIDEO SYS; GUN CAMERA; RANGE TIMING EQ; TELEMETRY EQ; 16MM MOTION PICTURE CAMERA W/DATADOORS; THRU-TANK-OPTICS VIDEO DEVICE; GUN ELEVATION LIMITING DEVICE; SLR CAMERA; AUTOMATIC FILM ANALYZER & DIGITIZER SYS; DATA ANALYSIS & RECORDING SUB-SYS; VIDEO I; VIDEO II; METEOROLOGICAL INSTRUMENTATION; MICROCOMPUTER DEVELOPMENT LAB; AUTOMATIC TARGET SCORING SYS; DIGITAL VIDEO PROCESSOR; BT-41 DIRECT COMBAT WEAPON SIMULATOR. ADP CAPABILITIES INCLUDE IN-HOUSE REDUCTION & ANALYSIS OF INSTR GENERATED DATA, TELECOMMUNICATIONS INTERFACE TO CD & T&E NETWORK & CLASSIFIED PROCESSING. 40 TON OVERHEAD CRANE; MACHINE SHOP & MAINT EQ SETS; CBT VEH, TACTICAL WHLD VEH & ENGR CONSTRUCTION EQ, ELEVATED CAMERA PLATFORM.



INSTALLATION: ARMY RESEARCH OFFICE

DURHAM, N.C.

DIR. DR. ROBERT E. WEIGLE

SCI. ADV. DR. HERMANN R. ROBL

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	85.857	92.000
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	0.076	0.106
TOTAL ANNUAL LAB	85.933	92.106
TOTAL INHOUSE	0.076	0.106
TOTAL INHOUSE RDT&E	0.000	0.000
ANNUAL OPERATING COST	1.388	2.100

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	2	0	2	0
CIVILIAN	125	39	39	86
TOTAL	127	39	41	86

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
6	0.000	26.500	0.000	26.500	0.000	0.633

...MISSION

TO MANAGE THE ARMY'S RESEARCH PROGRAM RELEVANT TO ARMY MISSIONS IN MATH AND PHYSICAL, ENGINEERING, ENVIRONMENTAL AND LIFE SCIENCES ACCOMPLISHED THRU CONTRACTS AND GRANTS WITH EDUCATIONAL AND RESEARCH INSTITUTIONS AND GOVERNMENT AND INDUSTRIAL LABS IN CONUS AND OVERSEAS.

...CURRENT IMPORTANT PROGRAMS

RESEARCH IN ARTIFICIAL INTELLIGENCE.  
CHEMICAL AND BIOLOGICAL DEFENSE.  
ROTARY WING AIRCRAFT RESEARCH.  
DIRECTED ENERGY RESEARCH.  
NOVEL NONDESTRUCTIVE EVALUATION.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

ADMINISTRATION OF RESEARCH PROGRAMS IN PHYSICAL SCIENCES  
MATHEMATICS, MATERIAL, ELECTRONICS, MECHANICS AND AERONAUTICS.  
ADMINISTRATION OF THE RESEARCH PORTION OF ARMY RESEARCH AND  
STANDARDIZATION OFFICE, LONDON, COORDINATES ARMY RESEARCH EFFORTS  
WITHIN THE ARMY AND WITH OTHER GOVERNMENT AGENCIES SUCH AS NAVY,  
NASA, DOD, DOE, NSF AND OTHERS.

INSTALLATION: ATMOSPHERIC SCIENCES LABORATORY

WHITE SANDS MR,N.M.

CDR. DIR. LTC. RONAN I. ELLIS

DEP. DIR. MR. JAMES E. MORRIS

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	28.208	31.849
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.019	0.022
TOTAL OTHER	2.996	1.695
TOTAL ANNUAL LAB	31.223	33.566
TOTAL INHOUSE	20.588	20.265
TOTAL INHOUSE RDT&E	17.573	18.548
ANNUAL OPERATING COST	6.011	6.751

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	181	0	3	178
CIVILIAN	341	29	110	231
TOTAL	522	29	113	409

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
15	49.467	26.663	85.658	161.788	7.477	23.757

...MISSION

TO PROVIDE THE US ARMY WITH SYSTEMS, TECHNIQUES AND EXPERTISE IN THE ATMOSPHERIC SCIENCES NECESSARY TO WIN THE AIRLAND BATTLE. THE ATMOSPHERIC SCIENCES LABORATORY IS RESPONSIBLE FOR THAT PORTION OF THE ERADCOM MISSION DEVOTED TO RESEARCH IN THE ATMOSPHERIC SCIENCES.

...CURRENT IMPORTANT PROGRAMS

TACTICAL WEATHER INTELLIGENCE AND ATMOSPHERIC SENSING ON THE BATFLD  
ATMOSPHERIC EFFECTS ON DIRECTED ENERGY WEAPONS  
BATTLEFIELD ATMOSPHERIC EFFECTS ON ARMY SYSTEMS AND OPERATIONS  
METEOROLOGICAL DATA SYSTEM, AN/TMQ-31, FOR ARTILLERY  
METEOROLOGICAL SUPPORT AND TECHNOLOGY FOR ARMY RDTE

...FUNCTIONS/EQUIPMENT/CAPABILITIES

DOD NATIONAL HIGH ENERGY LASER SYSTEM TEST FACILITY  
MULTISPECTRAL IMAGE DATA ACQUISITION SYSTEM (MIDAS)  
SIMULTANEOUS MULTISPECTRAL ABSOLUTE RADIOMETER/TRANSMISSOMETER (SMART)  
TRANSPORTABLE ATMOSPHERIC CHARACTERIZATION STATION (TACS)  
METEOROLOGICAL RDTE SUPPORT FACILITIES - ALASKA TO CANAL ZONE  
UPPER ATMOSPHERE RESEARCH AND SOUNDING ROCKET FACILITY AND CAPABILITY  
VISIOCEILOMETER (VISIBILITY/CLOUD SENSOR) PARTICLE MEASUREMENT SYSTEM  
(PMS) LOW VISIBILITY INFRARED (LOVIR) TRANSMISSOMETERS' LASER DOPPLER  
VELOCIMETER (REMOTE VERTICAL SOUNDER - WIND MEASUREMENTS)  
TARGET AREA MET UTILIZING INFERRED MET DATA (WIND/VISIBILITY) FROM RPVS  
METEOROLOGICAL DATA SYSTEM, AN/TMQ-31  
LIDAR SYSTEMS (1.06 MICRONS ND:YAG AND 10.6 MICRONS CARBON DIOXIDE)

INSTALLATION: AVIATION BOARD

FT. RUCKER, AL.

PRES. COL. ROBERT A. WAGG, JR

TECH. ADV. MR. G. E. SLAGLEY

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	5.322	3.579
TOTAL PROCUREMENT	0.834	0.208
TOTAL O&M	0.052	1.027
TOTAL OTHER	2.225	2.441
TOTAL ANNUAL LAB	8.533	7.255
TOTAL INHOUSE	7.911	7.255
TOTAL INHOUSE RDT&E	5.322	3.579
ANNUAL OPERATING COST	1.690	2.130

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	79	0	26	53
CIVILIAN	38	1	9	29
TOTAL	117	1	35	82

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
0	0.000	18.826	20.470	39.296	0.000	1.141

...MISSION

TO PLAN, CONDUCT AND REPORT ON OPERATIONAL TEST I, II AND IIA FOR NONMAJ AND OTHER TESTS AS DIRECTED BY HQ TRADOC. AVN BD DESIGNS AND CONDUCTS TESTING AND EVALUATION OF AVIATION SYSTEMS, SUBSYSTEMS AND ANCILLIARY EQUIPMENT.

...CURRENT IMPORTANT PROGRAMS

F0328 SCOUT I  
OTN1019 NAP-OF-THE-EARTH COMMUNICATION (NOE)  
CEPO84 LIQUID METHANE FUEL  
4000534 AIRBORNE TARGET HANDOFF SYSTEM (ATHS)  
OTN849 HELICOPTER OXYGEN SYSTEM.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

NO MAJOR EQUIPMENT OR FACILITY.

# INSTALLATION: AVIATION DEVELOPMENT TEST ACTIVITY

FT. RUCKER, AL.

CDR. COL WILLIAM B. WOODSON

## PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	10.223	8.379
TOTAL PROCUREMENT	3.021	2.728
TOTAL O&M	2.345	2.216
TOTAL OTHER	5.376	3.662
TOTAL ANNUAL LAB	18.965	16.985
TOTAL INHOUSE	18.965	16.985
TOTAL INHOUSE RDT&E	10.223	8.379
ANNUAL OPERATING COST	7.427	8.150

## PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	143	0	26	117
CIVILIAN	93	0	27	66
TOTAL	236	0	53	183

## SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1196	0.000	41.218	130.776	171.994	1.473	28.835

## ...MISSION

PLAN, CONDUCT, AND REPORT ON TESTS OF AVIATION SYSTEMS AND AVIATION RELATED EQUIPMENT FOR THE ARMY. PLAN, CONDUCT AND REPORT ON TESTS OF AVIATION SYSTEMS AND AVIATION RELATED SUPPORT EQUIPMENT FOR NON-ARMY GOVERNMENT AGENCIES AND PRIVATE IND

## ...CURRENT IMPORTANT PROGRAMS

ARMY HELICOPTER IMPROVEMENT PROGRAM (AHIP) (OH-58D)  
ADVANCED ATTACK HELICOPTER PROGRAM (AH-64)  
LOGISTICAL EVALUATION - CH-47D  
UH-60 HIRSS HOVER SUPPRESSOR  
LOGISTICAL EVALUATION - UH-60 ESSS

## ...FUNCTIONS/EQUIPMENT/CAPABILITIES

TWENTY-EIGHT FIXED AND ROTARY WING AIRCRAFT ARE ASSIGNED (8 UH-1, 3 CH-47 6 OH-58, 1 OV-1, 1 U-21, 5 AH-1, 1 T-42, 1 UH-60 AND 2 TH-55) WHICH MAY BE USED AS TEST BEDS FOR ALL COMPONENTS, EQUIPMENT OR SUPPLIES APPLICABLE TO THAT SERIES. A MODULAR ENGINE TEST SYSTEM (METS) PROVIDES ACCURATE MEASUREMENTS OF TURBINE ENGINE PERFORMANCE FOR ENGINES UP TO 5900 HP & WT UP TO 2000 LB. AN OVER-WATER RANGE IS AVAIL FOR RELIABILITY TESTING OF A/C WPNS SYSTEMS. ON-SITE DATA PROCESSING AND DISPLAY CAPABILITY EXISTS WITH A 01-11 & IBM 4331 COMPUTER SYS. ADMIN & TECH PHOTO CAP ARE AVAIL TO INCL VIDEO & 16MM INSTRUMENTATION CAMERAS. ANALOG AND DIGITAL MEASUREMENTS CAN BE COLLECTED, USING 14-TRACK INSTR RECORDERS. USAAVNDA HAS B&W & COLOR VIDEO RECORDING CAP, AS WELL AS STRIP-CHART & OSCILLOGRAPH RECORDERS & AIRINC 514 AIRLINE-TYPE CRASH RECORDERS.

INSTALLATION: AVIATION ENGINEERING FLIGHT ACTIVITY

EDWARDS AFB, CA.

CDR. COL ALAN R. TODD

TECH. DIR. MR. JAMES S. HAYDEN

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	7.283	7.654
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	1.414	1.555
TOTAL ANNUAL LAB	8.697	9.209
TOTAL INHOUSE	8.196	8.723
TOTAL INHOUSE RDT&E	6.782	7.168
ANNUAL OPERATING COST	2.079	2.183

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	65	0	24	41
CIVILIAN	100	0	32	68
TOTAL	165	0	56	109

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
19	9.200	1.600	124.800	135.600	4.042	26.977

...MISSION

PRODUCE ENGR FLT TEST DATA ON ACFT PERF, HANDLING QUALITIES VIBRATION  
SYS/SUBSYSTEM INTERFACE FOR USE IN ACFT DEVELOPMENT AND QUALIFICATION.  
SUSTAIN THE CAPABILITY TO COMPLETELY INSTRUMENT TEST ACFT WITH ONBOARD  
RECORDING/TELEMETRY REAL TIME DATA REDUCTION. CONDUCT PRE-TPS ORIENT.

...CURRENT IMPORTANT PROGRAMS

UH-1H PNEUMATIC BOOT DEICING  
CH-47D AIRWORTHINESS AND FLIGHT CHARACTERISTICS  
PAE UH-60A/IMPROVED A/S SYSTEM  
PAE UH-1H HOVER DEGRATION/ROTOR ICIND  
PAE AND AIRWORTHINESS AND FLIGHT CHARACTERISTICS UH-60A ESSS

...FUNCTIONS/EQUIPMENT/CAPABILITIES

JT-28B 2T-28B OV-1C JU21A JAHIS 2JCH-47C JOH-58C JUH-60A 5JUH-1H  
ACFT MAINTENANCE CAPABILITY  
ACFT MODIFICATION CAPABILITY  
ACFT INSTRUMENTATION CAPABILITY  
AIRBORNE DATA ACQUISITION-SYSTEM  
IEMR COMPUTER WITH TELEMETRY  
3REMOTE GROUND STATIONS WITH COMPUTER AND TELEMETRY CAPABILITY  
MILIKEN, 2MINOLTA, 2BRONICA, PRINT DRYER, 2ENLARGERS 16PCS VIDEO EQUIP  
2TEXT EDITORS, 2MAG TYPEWRITERS, AUTO COMPOSING SYSTEM.

INSTALLATION: AVIATION RESEARCH & TECHNOLOGY LABORATORIES MOFFETT FIELD, CA.

DIR. DR. RICHARD M. CARLSON

DEP. DIR. COL. WALTER URBACH, JR

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	80.413	80.250
TOTAL PROCUREMENT	3.718	14.157
TOTAL O&M	1.235	0.500
TOTAL OTHER	0.838	1.437
TOTAL ANNUAL LAB	86.204	96.344
TOTAL INHOUSE	30.991	37.356
TOTAL INHOUSE RDT&E	27.573	29.757
ANNUAL OPERATING COST	6.111	7.655

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	16	1	13	3
CIVILIAN	359	27	258	101
TOTAL	375	28	271	104

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
127	88.848	58.673	16.370	163.891	2.272	17.001

...MISSION

MANAGE AND EXECUTE RESEARCH AND DEVELOPMENT OF ARMY AIRMOBILE SYSTEMS. PROVIDE TECHNICAL SUPPORT TO PROJECT/PRODUCT MANAGERS AND SYSTEM DEVELOPERS AS REQUIRED. PROVIDE INDEPENDENT TECHNICAL RISK ASSESSMENT TO COMMANDER USAVSCOM AND HIGHER AUTHORITY.

...CURRENT IMPORTANT PROGRAMS

RSCH IN FUNDAMENTAL ROTOR/ROTORCRAFT AERODYNAMICS, DYNAMICS, AND NOISE. R&D OF ENGINES, SMALL GAS TURBINES, TRANSMISSIONS, AND BEARINGS. R&D TO IMPROVE RELIABILITY & MAINTAINABILITY OF AIRMOBILE SYSTEMS. RSCH COMPOSITES & EVALUATE APPLICATIONS TO IMPROVE STRUCTURES FOR A/C. EVOLVE TECHNOLOGY & CRITERIA TO IMPROVE FLIGHT SAFETY & SURVIVABILITY.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

THREE LABORATORIES — AT MOFFETT FIELD CA, CLEVELAND OH, HAMPTON VA; CO-LOCATED WITH NASA; PARTICIPATING IN AERONAUTICAL RESEARCH AND DISCIPLINES; JOINTLY USING WIND TUNNELS, SIMULATORS AND LABORATORY TEST FACILITIES, INCLUDING SHOPS, FLIGHT LINE AND HANGER, ENGINE AND TRANSMISSION TEST FACILITIES AND COMPUTATIONAL EQUIPMENT. FOURTH LABORATORY AT FORT EUSTIS VA, PERFORMING ADVANCED APPLICATIONS WORK INCLUDING AIRCRAFT WEAPONIZATION AND MISSION SUPPORT EQUIPMENT. MAJOR EQUIPMENT AND FACILITIES ARE FILAMENT WINDING MACHINES, TENSILE TESTERS, VIBRATION TESTER, SMALL BALLISTIC RANGE, CALIBRATION LAB, ENVIRONMENT CHAMBER, ATOMIC ABSORPTION SPECTROMETER, TELEMETER GROUND STATION, NON-DESTRUCT TESTING FACILITY, AND FLIGHT SAFETY LAB.

INSTALLATION: AVIONICS R & D ACTIVITY

FT. MONMOUTH, N. J.

CDR. COL. DARROLD GARRISON

DEPUTY DIR. MR. THEODORE SUETA

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	20.851	17.249
TOTAL PROCUREMENT	5.506	3.757
TOTAL O&M	6.301	5.636
TOTAL OTHER	2.186	2.290
TOTAL ANNUAL LAB	34.844	28.932
TOTAL INHOUSE	13.231	13.600
TOTAL INHOUSE RDT&E	5.250	5.720
ANNUAL OPERATING COST	4.359	4.073

PERSONNEL	PERSONNEL DATA (END OF FY 1983)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	17	0	11	6
CIVILIAN	261	6	162	99
TOTAL	278	6	173	105

ACRES	SPACE AND PROPERTY				COST (MILLION \$)	
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
0	52.450	13.140	19.100	84.690	0.000	10.781

...MISSION

RESPONSIBLE FOR THAT PORTION OF AVSCOMS MISSION WHICH PERTAINS TO AVIONICS FROM RESEARCH THRU FIRST TIME PRODUCTION. THIS ENCOMPASSES: SYS ARCHITECTURE; AVIONICS HARDWARE; (I.E. COMM NAV, IMAGE AND SIGNAL PROCESSING, AIRBORNE CMD AND CONTROL); AND SYS ENGINEERING/INTEGRATION.

...CURRENT IMPORTANT PROGRAMS

ARMY DIGITAL AVIONICS SYSTEM.  
INTEGRATED INERTIAL NAVIGATION SYSTEM.  
ADVANCED DIGITAL COMMUNICATIONS.  
NIGHT NAVIGATION AND PILOTAGE SYSTEM.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

MAJOR EQUIPMENT INCLUDES DIGITAL HOT BENCH, AUTOMATED DATA COLLECTION AND REDUCTION EQUIPMENT, AND AUDIO/DIGITAL ANALYZERS. FACILITIES INCLUDE ACOUSTIC/AUDIO ANALYSIS FACILITY, TACTICAL AVIONICS SYSTEM SIMULATOR (TASS), SYSTEM TEST BED FOR AVIONICS RESEARCH (STAR), COMPUTER AIDED DESIGN/ENGINEERING, (CAD/E) FACILITY, AVRADA PRODUCT ASSURANCE AND COMPUTATION FACILITY, ADJACENT HELIPORT, PLANNED POST DEPLOYMENT SOFTWARE SUPPORT CENTER.

INSTALLATION: BALLISTIC RESEARCH LABORATORY

ABERDEEN PROV. GR., MD

DIR. DR. ROBERT J EICHELBERGER

DEP. DIR. COL JAMES V. WASSON

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	58.629	60.800
TOTAL PROCUREMENT	1.082	1.200
TOTAL O&M	1.653	1.795
TOTAL OTHER	8.189	8.500
TOTAL ANNUAL LAB	69.553	72.295
TOTAL INHOUSE	54.737	56.915
TOTAL INHOUSE RDT&E	44.503	46.139
ANNUAL OPERATING COST	11.143	11.905

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	25	0	8	17
CIVILIAN	691	111	414	277
TOTAL	716	111	422	294

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1920	511.780	11.200	40.982	563.962	15.426	47.949

MISSION

ARMY LEAD LAB FOR BALLISTIC TECHNOLOGY, VULN/VULN REDUCTION, CHARGED PARTICLE BEAM TECH AND LIQUID PROPULSION TECH. MAINTAIN WEAPONS ORIENTED FUND. RSCH. PROG. RELATED TO ARMY NEEDS. CONDUCT EXPLORATORY DEV. EFFORTS TO SOLVE MILITARY PROBLEMS AND EVAL. SOLUTION FEASIBILITY.

CURRENT IMPORTANT PROGRAMS

ANTI-ARMOR WARHEADS AND KINETIC ENERGY PENETRATORS.  
BALLISTIC PROTECTION TECHNOLOGY FOR US MATERIEL.  
LIQUID PROPULSION TECHNOLOGY GUNS.  
VULNERABILITY ANALYSIS/VULNERABILITY REDUCTION US/THREAT MATERIEL.  
POSITION SURVIVABILITY ANALYSES AND ENHANCEMENT.

FUNCTIONS/EQUIPMENT/CAPABILITIES

LASER DIAGNOSTIC FACILITY FOR PROPELLANT/FLAME ANALYSIS; COMPUTED TOMOGRAPHY FOR BALLISTIC EVENTS; PROPELLANT FRACTURE MECHANICS ANALYSIS FACILITY; INSTRUMENTED INDOOR AERODYNAMIC FLIGHT RANGES FOR PROJECTILES UP TO 8 INCHES; THREE DEGREE-OF-FREEDOM FLIGHT SIMULATOR FOR SHELL UP TO 155MM; EXPLOSIVE MECHANICS TEST FACILITY; HIGH EXPLOSIVE CASTING AND PRESSING; HIGH ALTITUDE BLAST SPHERE; THERMAL/BLAST SHOCK TUBE TO SIMULATE NUCLEAR EFFECTS; ADVANCED HIGH KINETIC ENERGY LAUNCH SYSTEM FOR ANTI-ARMOR RESEARCH; ANECHOIC CHAMBER FOR MM WAVE RADAR, SENSOR, AND SCALE MODEL SIGNATURE RESEARCH; ION BEAM ACCELERATOR; FIELD TEST FAC. FOR WARHEAD, PENETRATOR, EXPLOSIVE AND ARMOR RESCH; HIGH SPEED AND SPARK PHOTOGRAPHY; X-RAY CINERADIOGRAPHY; COMPUTER AIDED DESIGN ENG.; AND CENTRAL SITE AND MINI COMPUTERS WITH 650 REMOTE INTERACTIVE TERMINALS.



INSTALLATION: BELVOIR R & D CENTER

FT. BELVOIR, VA.

CDR. COL. DENNIS B. BULGER

TECH. DIR. MR. T. W. LOVELACE

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	106.095	134.365
TOTAL PROCUREMENT	183.279	137.217
TOTAL O&M	16.785	14.399
TOTAL OTHER	0.000	0.000
TOTAL ANNUAL LAB	306.159	285.981
 TOTAL INHOUSE	 49.854	 48.597
TOTAL INHOUSE RDT&E	39.399	39.860
ANNUAL OPERATING COST	18.653	19.000

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	71	1	66	5
CIVILIAN	1178	27	399	779
TOTAL	1249	28	465	784

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1052	353.082	186.816	268.237	808.135	18.871	37.028

...MISSION

PROVIDE THE ARMY WITH NEW, IMPROVED COMBAT SUPPORT, COMBAT SERVICE SUPPORT EQMT THROUGH RESEARCH, DEVELOPMENT, ENGINEERING, INITIAL ACQUISITION, AND SUBSEQUENT ACQUISITION SUPPORT IN MOBILITY/COUNTER-MOBILITY, ENERGY, SURVIVABILITY, AND LOGISTICS EQMT SYSTEMS.

...CURRENT IMPORTANT PROGRAMS

COUNTERMINE/COUNTEROBSTACLE EQMT  
FUELS, LUBES DEV  
TACTICAL DECEPTION DEVICES  
WATER SUPPLY EQMT  
PETROLEUM DISTRIBUTION SYSTEM.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

ACCOMPLISH RSCH, DEV, ACQUISITION OF MAT FOR COUNTEROBSTACLE, BARRIERS, FIELD FORTIFICATION TACTICAL DECEPTION CAMO, TUNNEL DETECTION, PHYS SECURITY, FUELS, LUBES, FUEL HNDLG EQMT, ELEC POWER GENERATION, TOPOGRAPHY, WATER SUPPLY, MAT HNDLG, MARINE, RAIL TRANSPORT, BRIDGING, CONSTRUCTION EQMT. FACILITIES INCLUDE MINE FIELD TEST LANES, SENSOR TEST AREA, RDO FREQ ANECHOIC CHAMBER, FIRE SUPPRESSION CHAMBER, BRIDGE TEST HANGER, MOBILE STRESS ANALYSIS VAN, TRUCK STABILITY TILT TABLE, VEHICLE TEST TRACKS, SHOCK AND VIBRATION DYNAMICS SIM, ENVIRONMENTAL SIMULATION, RAIL IMPACT TEST FACILITY, MATERIALS RESEARCH LABORATORY, STILL AND MOTION PICTURE SUPPORT, RESEARCH AND DEVELOPMENT MODEL FABRICATION SHOPS.

INSTALLATION: CHEMICAL R&D CENTER

ABERDEEN PROV, GR., MD

CDR. BG. HOWARD C. WHITTAKER

DEP. DIR. DR. B. RICHARDSON

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	102.490	117.029
TOTAL PROCUREMENT	24.070	63.300
TOTAL O&M	9.700	8.015
TOTAL OTHER	1.950	2.000
TOTAL ANNUAL LAB	138.210	190.344
TOTAL INHOUSE	79.665	76.655
TOTAL INHOUSE RDT&E	57.920	55.940
ANNUAL OPERATING COST	10.321	12.671

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	95	6	39	56
CIVILIAN	903	71	596	307
TOTAL	998	77	635	363

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1750	434.009	211.091	549.086	1194.186	21.815	32.656

...MISSION

A RSCH, DEV AND ENGR LAB PROVIDING US FORCES WITH CAPABILITY TO OPERATE ON A CML/BIOL BATTLEFIELD AND DETER CML ATTACK. PROVIDE LIFE CYCLE ENGR FOR CML WEAPONS AND CML/BIOL DEFENSE. ACT AS DOD LEAD LAB FOR CML DEF/ DETERRENCE. CONDUCT SMOKE/OBSCURANT TECH BASE. COORDINATE INTL PROGRAMS.

...CURRENT IMPORTANT PROGRAMS

CB RECONNAISSANCE, DETECTION AND IDENTIFICATION  
INDIVIDUAL/COLLECTIVE PROTECTION  
CB DECONTAMINATION AND CONTAMINATION AVOIDANCE  
SMOKE OBSCURANT SYSTEMS  
CHEMICAL DETERRENT SYSTEMS.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

BASIC RESEARCH; SMOKE/OBSCURANT SYSTEMS; CHEMISTRY AND EFFECTS OF THREAT AGENTS; ANALYSIS AND INTEGRATION OF CML DEF SYSTEMS; RECONNAISSANCE, DETECTION, AND IDENTIFICATION; INDIVIDUAL PROTECTION; COLLECTIVE PROT; DECONTAMINATION AND CONTAMINATION AVOIDANCE; TRAINING SYSTEMS; TOXIN DEFENSE; CHEMICAL DETERRENT SYSTEMS.  
MAJOR EQUIPMENT IS CONTAINED IN A COMPLEX OF ENGR/LAB AREAS. INCLUDES CML PILOT PLANTS, AEROSOL CHAMBER, MUNITION FILLING FACILITY, PRODUCTION AND FACILITY DESIGN, CHAMBER FOR STUDIES ON SPEECH TRANSMISSION, SIMULANT AGENT CHALLENGE TEST CHAMBER, RUBBER/ELASTOMER MOLD FACILITY, SPECIALIZED CHEMICAL AGENT LAB, PYROTECHNIC MIXING, LOADING, HANDLING FACILITY, COMPUTERMAN, INDOOR BALLISTIC RANGE, SUBSONIC-SUPERSONIC, TRANSONIC WIND TUNNEL.

# INSTALLATION: COLD REGIONS R&E LABORATORY

HANOVER, N.H.

CDR. DIR. COL. M. F. ROTH

TECH. DIR. DR. LLOYD BRESLAU

## PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	10.888	12.068
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.475	1.037
TOTAL OTHER	8.267	9.443
TOTAL ANNUAL LAB	19.630	22.548
TOTAL INHOUSE	14.280	10.758
TOTAL INHOUSE RDT&E	6.968	7.724
ANNUAL OPERATING COST	3.839	4.256

## PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	15	0	3	12
CIVILIAN	26	34	125	138
TOTAL	27	34	128	150

## SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
20	80.787	30.027	133.024	243.838	8.835	9.618

## ...MISSION

AS THE ARMY LABORATORY FOR SCIENCE AND TECHNOLOGY IN COLD REGIONS, THE COLD REGIONS RESEARCH & ENGINEERING LABORATORY CONDUCTS AND COORDINATES RESEARCH APPLICABLE TO THE ARMY'S NEEDS WHERE WINTER WEATHER AND COLD PRESENT A SEVERE PROBLEM. MANAGE ARMY COLD REGIONS INFORMATION CENTER

## ...CURRENT IMPORTANT PROGRAMS

WINTER COMBAT OPERATIONS TECHNOLOGY  
IMPACT OF WINTER ENVIRONMENT ON NEW WEAPON SYSTEMS AND OTHER MATERIEL  
FACILITIES CONST, OPERATION, & REPAIR IN TEMP & ARCTIC COLD CONDITIONS  
IMPROVE WINTER NAVIGATION  
DEVELOP ENVIRONMENTAL REMOTE SENSING APPLICATIONS

## ...FUNCTIONS/EQUIPMENT/CAPABILITIES

THE MAIN LABORATORY AT USACRREL CONTAINS 24 COLD LABS (WHICH CAN BE OPERATED TO -58 F), SPECIAL TESTING APPARATUS FOR FROZEN MATERIALS, AN ICE ENGINEERING FACILITY FOR LARGE MODELING EXPERIMENTS WITH ICE, A CHEMISTRY LAB, AN ELECTRON MICROSCOPE LAB, A SOILS PROCESSING LAB, A PAVEMENT TEST FACILITY FOR TESTING UNDER FREEZING/THAWING CONDITIONS, A WASTEWATER TREATMENT RESEARCH FACILITY, A COMPUTER FACILITY, A MASS SPECTROMETER, A GAS CHROMATOGRAPH, AND A SMALL LASER FACILITY. THE ALASKA PROJECTS OFFICE AT FAIRBANKS CONDUCTS RESEARCH AND PROVIDES LOGISTICS SUPPORT FOR OTHER RESEARCH. USACRREL'S MILITARY AND CIVILIAN PERSONNEL HAVE EXPERTISE COVERING A WIDE RANGE OF SCIENTIFIC AND ENGINEERING DISCIPLINES RELATED TO COLD REGIONS RESEARCH. NEW FACILITIES SCHEDULED FOR CONSTRUCTION INCLUDE A FROST EFFECTS RESEARCH FACILITY.

INSTALLATION: COLD REGIONS TEST CENTER

APO SEATTLE, WA.

CDR. COL. JESSE H. DENTON

TECH. ADV. MR. WILLIAM J. HASLEM

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	7.935	6.159
TOTAL PROCUREMENT	0.090	0.080
TOTAL O&M	0.006	0.000
TOTAL OTHER	5.303	5.462
TOTAL ANNUAL LAE	12.434	11.701
TOTAL INHOUSE	12.434	11.701
TOTAL INHOUSE RDT&E	7.035	6.159
ANNUAL OPERATING COST	7.305	6.159

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	263	0	31	232
CIVILIAN	22	0	11	11
TOTAL	285	0	42	243

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
647155	0.000	18.205	236.033	254.238	10.336	9.283

...MISSION

PLAN, CONDUCT, AND REPORT THE RESULTS OF COLD REGIONS, MOUNTAIN AND NORTHERN ENVIRONMENTAL PHASES OF DEVELOPMENT AND OTHER TEST; REVIEW PLANS AND MONITOR DEVELOPMENT TESTING IAW INTEGRATED TESTING CYCLE POLICIES. PROVIDE ADVICE AND GUIDANCE TO GOVT AGENCIES AND PRIVATE IND.

...CURRENT IMPORTANT PROGRAMS

M1E1 ABRAMS TANK  
AN-TPQ 36&37 RADAR  
LIGHT ARMOR VEHICLE (LAV)  
SMALL UNIT SUPPORT VEHICLE (SUSV)  
MODULAR PACK MINE SYSTEM.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

FACILITY CAN ACCOMMODATE A WIDE VARIETY AND LARGE NO TEST AT ANY ONE TIME. SEVERAL VEH TEST COURSES AND EXTENSIVE CROSS COUNTRY TERRAIN RANGES ARE AVAILABLE. 500,000 ACRE ISOLATED IMPACT AREA, 50KM MAX UNOBSERVED RANGE. LARGE RESTRICTED AIRSPACE WITH UNRESTRICTED FIRING TO 108000 FT ORDINATE. COORD WITH FAA CAN EFFECT UNRESTRICTED ORDINATE. 1ST, 2ND, OR 3RD ORDER SURVEY POINTS. GOOD SECONDARY ROADS. PHONE/NON-TAC RADIO AT ALL RANGES AND TEST SITES. AUTODIN, FACSIMILE, TELETYPE, PHOTO LAB AND MAINT FOR MAJORITY OF EQUIP INCL ACFT, DS/GS CALIBRATION, LIMITED ENGR SUPPORT. ARMY AVN AND USAF ACFT CAN BE ARRANGED. METEOROLOGICAL SPT AVAIL. INST FOR MOST ITEMS AVAIL, CAN OBTAIN OTHER INSTRUMENTS. MOVING TARGET SYSTEM, EOD, STATISTICAL, MAINT EVALUATION, AND HUMAN FACTORS CAPABILITIES AVAILABLE. COMPUTER FACILITY AVAILABLE. TEMPERATURES TO -50 F COMMON.

INSTALLATION: COMBAT SURVEILLANCE & TGT ACQUISITION LAB FT. MONMOUTH, N.J.

DIR. COL. JOHN MARKHAM

DEPUTY DIR. MR. THOMAS DANIELS

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	24.344	33.941
TOTAL PROCUREMENT	11.451	69.155
TOTAL O&M	2.016	1.814
TOTAL OTHER	0.160	0.270
TOTAL ANNUAL LAB	37.971	105.180
TOTAL INHOUSE	9.567	12.473
TOTAL INHOUSE RDT&E	7.816	7.912
ANNUAL OPERATING COST	2.220	2.440

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	12	0	8	4
CIVILIAN	167	3	98	69
TOTAL	179	3	106	73

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
35	52.324	6.139	10.589	69.052	0.680	7.050

...MISSION

RADIOLOGICAL TEST SHIELD & SOURCES  
RADAR TEST RANGE - 2000 FT & 50 FT PLATFORM  
ANACHOIC CHAMBER FOR RADAR PATTERN TEST  
TARGET TURN-TABLE FOR RADAR, OPTICAL SIGNATURE STUDIES

...CURRENT IMPORTANT PROGRAMS

WIDE AREA AERIAL RADAR SURVEILLANCE & TARGET LOCATION SYSTEMS  
ACOUSTIC & RADAR TECHNOLOGY TO LOCATE ENEMY WEAPONS  
LOW PROBABILITY OF ENEMY DETECTION RADARS  
AERIAL & GROUND RADIOLOGICAL SURVEY SYSTEMS  
NON COOPERATIVE & COOPERATIVE IFF SYSTEMS.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

NON COOPERATIVE TARGET RECOGNITION TEST BED

INSTALLATION: COMMUNICATIONS - ELECTRONICS BOARD

FT. GORDON, GA.

PRES. COL. EDWIN W. CHANDLER

ENGR. ADV. MR. RONNIE E. BRACKETT

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	2.818	3.186
TOTAL PROCUREMENT	0.308	0.193
TOTAL O&M	0.019	0.369
TOTAL OTHER	2.519	2.600
TOTAL ANNUAL LAB	5.664	6.348
TOTAL INHOUSE	5.664	6.348
TOTAL INHOUSE RDT&E	2.818	3.186
ANNUAL OPERATING COST	1.091	1.244

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	59	0	41	18
CIVILIAN	31	0	12	19
TOTAL	90	0	53	37

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
7	0.000	20.950	0.498	21.448	0.215	1.416

...MISSION

PLANS, CONDUCTS AND REPORTS ON OPERATIONAL TESTS OT I, II, AND, III OF C-E SYSTEMS AND FORCE DEVELOPMENT TESTING AND EXPERIMENTATION AS PUBLISHED IN THE DA FIVE YEAR TEST PROGRAM. CONDUCTS CONCEPT EVALUATION PLANS AND OTHER USER-RELATED/CUSTOMER TEST DIRECTED BY TRADOC

...CURRENT IMPORTANT PROGRAMS

AN/TSC-85A AND AN/TSC-93A TACSATCOM, 84-OTN-729  
TACTICAL ARMY CSS COMPUTER SYSTEM -TACCS- OTII, 84-OTN-1124  
ANTI-JAM-AJ-/CONTROL MODEMS FOR GMF TACSAT, 84-OTN-502  
AN/PSC-3, MANPACK AND AN/VSC-7 BASE STATION, 84-OTN-727  
AN/TSQ-84A UPGRADE COMMUNICATIONS TECH CONT CTR, 84-OTN-714.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

MANUAL AND AUTOMATED STIMULUS AND MEASUREMENT EQUIPMENT THAT PROVIDES DATA COLLECTION AND ANALYSIS CAPABILITY OF COMMUNICATIONS-ELECTRONICS CIRCUITS, EQUIPMENT, AND SYSTEMS.

INSTALLATION: COMMUNICATIONS - ELECTRONICS R & D CENTER FT MONMOUTH, N.J.

CDR. MG LAWRENCE F. SKIBBIE TECH. DIR. MR. THEODORE PFEIFFER

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	110.497	0.000
TOTAL PROCUREMENT	29.279	0.000
TOTAL O&M	8.732	0.000
TOTAL OTHER	2.943	0.000
TOTAL ANNUAL LAB	151.451	0.000
TOTAL INHOUSE	47.690	0.000
TOTAL INHOUSE RDT&E	35.903	0.000
ANNUAL OPERATING COST	1.762	0.000

PERSONNEL	PERSONNEL DATA (END OF FY 1983)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	73	0	22	51
CIVILIAN	551	14	362	189
TOTAL	624	14	384	240

ACRES	SPACE AND PROPERTY				COST (MILLION \$)	
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
0	59.031	79.011	11.200	149.242	0.000	22.500

...MISSION

CONDUCT RSCH, EXPL, ADV & ENGR DEV OF COMM. EQUIP & SYSTEMS, MILITARY COMPUTER EQUIP & SYSTEMS, & COMPUTER SOFTWARE. CONDUCT SYSTEM ENGR FOR TACTICAL COMMAND, CONTROL & COMM. SYSTEM DESIGN. PROVIDE FOR PROD. DIST. & DEL. OF DOCTRINAL, INSTRUCTIONAL & TECHNICAL MATERIALS.

...CURRENT IMPORTANT PROGRAMS

DISTRIBUTED COMMAND CONTROL & COMMUNICATION (DC3)  
PACKET RADIO TECHNOLOGY  
MILITARY COMPUTER FAMILY  
BATTLEFIELD SPECTRUM MANAGEMENT  
ELECTRONIC INFORMATION DELIVERY SYSTEM.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

COMMUNICATIONS SYSTEM DESIGN CENTER  
ACOUSTIC RESEARCH LABORATORY  
TELEPROCESSING DESIGN CENTER  
SYSTEMS VALIDATION FACILITY  
EXPERIMENTAL DISTRIBUTED PROCESSING FACILITY  
SOFTWARE DEVELOPMENT SUPPORT SYSTEM  
TACTICAL DATA BASE MANAGEMENT SYSTEM  
CENSEI INTEROPERABILITY TEST CENTER  
CENSEI SYSTEM SIMULATION FACILITY

INSTALLATION: CONSTRUCTION ENGINEERING RESEARCH LAB

CHAMPAIGN, IL.

CDR. DIR. COL. PAUL J. THEUER TECH. DIR. DR. L. R. SHAFFER

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	19.445	20.821
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	2.398	3.050
TOTAL OTHER	2.155	2.783
TOTAL ANNUAL LAB	23.998	26.654
TOTAL INHOUSE	15.631	18.428
TOTAL INHOUSE RDT&E	12.506	14.103
ANNUAL OPERATING COST	4.000	4.000

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	11	0	11	0
CIVILIAN	208	29	141	67
TOTAL	219	29	152	67

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
30	56.735	31.750	20.019	111.554	6.500	6.000

... MISSION

PLAN AND EXECUTE RESEARCH TO OBTAIN THE BEST COMBINATION OF ENGINEERING DESIGN, CONSTRUCTION, OPERATIONS AND MAINTENANCE TO PROVIDE FACILITIES FOR THE MILITARY ESTABLISHMENT AND OTHER AGENCIES AT LEAST COST AND TO DISSEMINATE THE RESEARCH RESULTS.

...CURRENT IMPORTANT PROGRAMS

DEV ENERGY CONS TECH/PROC FOR MIL INSTLS  
DEV COMPUTER AIDED SYSTEMS FOR PLANNING AND DESIGN  
DEV IMPROVED SYSTEMS FOR RPMA OF MIL FACILITIES  
DEV SYSTEMS FOR ENVIRONMENTAL QUALITY MGMT  
ADAPT ALTERNATE FUELS TECH FOR MIL FACILITIES

...FUNCTIONS/EQUIPMENT/CAPABILITIES

CONTROLLED ENV CHAMBERS; ION PLATING EQMT; 1000000-PD CLOSED-LOOP MTRL TEST SYS; SCANNING ELECTRON MICROSCOPE; SEMI-AUTO WELDING EQMT; BI-AXIAL SHOCK TEST MACHINE; NON-DES TESTING FAC; VACUUM INDUCTION FURNACES; METALLOGRAPHIC SAMPLE PREP; METALLOGRAPH X-RAY DIFFRACTION AND VACUUM SPECTROSCOPY SYS; DYNAMIC TENSION ANALYSIS SYS; DIGITAL RECORDING ANAL EQMT; AND HVAC TEST FAL. CAPABILITIES INCLUDE SYSTS BUILDING METHODS AND TECHS; COMPUTER-BASED DESIGN AND CONST MGMT TECHS; ENERGY SYSTS DESIGN; ENERGY CONSERVATION AND ALTERNATE FUELS; HARDENED FACS ANALYSIS; ENV QUALITY MGMT; POLLUTION CONTROL ABATEMENT; MIL HOUSING SYSTS; TRAINING-AREA MAINTENANCE AND MGMT; MOBILIZATION FACS; QUALITY OF LIFE AND ARCHITECTURAL RESEARCH; AND ELECTROMAGNETIC PULSE INTERFERENCE RESEARCH.



INSTALLATION: DUGWAY PROVING GROUND

DUGWAY, UT.

CDR. COL. GEORGE A. CARRUTH

SCI. DIR. DR. LOTHAR L. SALOMON

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	43.453	42.356
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	1.968	1.486
TOTAL OTHER	5.808	6.016
TOTAL ANNUAL LAB	51.229	49.858
TOTAL INHOUSE	35.931	36.693
TOTAL INHOUSE RDT&E	30.253	31.667
ANNUAL OPERATING COST	15.556	14.606

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	143	2	21	122
CIVILIAN	608	14	73	535
TOTAL	751	16	94	657

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
840911	104.875	201.133	1643.266	1949.274	80.671	33.980

...MISSION

DPG PLANS & CONDUCTS APPROVED TESTS TO ASSESS THE MILITARY VALUE OF CML WEAPONS, SMOKE/OBSCURANTS & CML-BIO DEF SYS. TESTS SPT R&D & PROVIDE BASIS FOR DEVELOPMENT OF NEW OPERATIONAL & LOGISTICAL CONCEPTS FOR EMPLOYMENT OF TESTED SYS. TESTS ARE RESPONSIVE TO USER REQUIREMENTS,

...CURRENT IMPORTANT PROGRAMS

CONDUCTS SERVICE DEV CML CML-BIO DEFENSE SMOKE/OBSCURANT TEST PROGRAMS  
CONDUCTS R & D & LAB INVESTIGATIONS NECESSARY TO SUPPORT MISSION  
CONDUCTS JT OP CML & CML-BIO DEFENSE TESTS/STUDIES FOR CINCS, SERVICES  
CONDUCTS PROG TO SUP ARMY POLL ABATEMENT HAZARD EVAL & DEMIL OPNS  
CONDUCTS ECOLOGICAL EPIDEMIOLOGICAL & TOXICOLOGICAL SURVL OF DPG AREA

...FUNCTIONS/EQUIPMENT/CAPABILITIES

INST GRIDS FOR CML CML-BIO TESTS: ARTY RG FOR CONVL & CML METAL PARTS, BALLISTIC & DISSEM TESTS: WITH FIELD SMPL, SMPL MASS ANAL, MET(AUTO DATA ACQ & MESOMET NETWK)SYS. TSPI(RADAR SLAVE PHOTO)SYS; PHYS & EVNIRON TEST FAC(MIL SPEC 810) CHAMBERS FOR TOTAL AGENT CONTAINMNT; EXPLO SHIELDING PROPAGATION & OVERPRESSURE MEASMNTS, OPNS SPTD BY MET RSCH ON BEHAVIOR OF CLOUDS; CML, LIFE SCI TECHN, ECOL SURVL OF DPG; CAPBL FOR PLANNING ANAL, EVAL OF TESTS, OPNS RSCH; LABS EQUIPD FOR WIDE RNG OF CML, MICROBIOL, TOXICOL, IMMUNOL, ECOL, EPIDEMIO, POLL CNTL STUDIES: CAPBL FOR PROD BIO SIMUL AG; TECHN & MASS ASSAY OF FLOURESCENT AIR TRACERS; EXTENSY COMM & RG SAFETY SYS. OUTSTANDING ARE LARGE LAND AREA, RESTRICTED AIR SPACE, LONG & FLAT ARTY RANGES, PROJECTILE RECOVERY, SONIC & ELECTROMAG STERILITY, DIVERSE SKILLS.

INSTALLATION: ELECTRONIC PROVING GROUND,

FORT HAUCHUCA, AZ.

CDR. COL. WILLIAM R. HARNAGEL TECH. DIR. MR. GRADY H. BANISTER, JR

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	33.533	41.066
TOTAL PROCUREMENT	1.737	4.501
TOTAL O&M	1.316	1.469
TOTAL OTHER	11.415	11.090
TOTAL ANNUAL LAB	48.001	58.066
TOTAL INHOUSE	30.463	28.276
TOTAL INHOUSE RDT&E	17.903	13.912
ANNUAL OPERATING COST	11.999	12.014

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	610	0	29	581
CIVILIAN	212	0	82	130
TOTAL	822	0	111	711

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
67000	0.150	42.685	232.393	275.228	8.500	23.100

...MISSION

PLAN, CONDUCT, EVALUATE AND REPORT ON DEVELOPMENT AND OTHER ENGINEERING. LAB-TYPE TESTS OF GROUND AND AIRBORNE EQUIPMENT AND SYSTEMS THAT UTILIZE ELECTRONIC/ELECTROMAGNETIC TECHNOLOGY. MAINTAIN MODERN TEST FACILITY, INSTRUMENTATION, AND METHODOLOGY CAPABILITY.

...CURRENT IMPORTANT PROGRAMS

REMOTELY PILOTED VEHICLE  
SINGLE CHANNEL GROUND AIRBORNE RADIO SYSTEM  
C3I SYS TEST CAPABILITY  
DATA LINK VULNERABILITY JOINT TEST FORCE  
QUICK FIX EH-60A, AN/ALQ-151.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

CONDUCT TESTS OF HDWR/SOFTWARE, DOCTRINAL CONCEPTS/SCENARIOS TEST CAPABILITY INCL TEST OF COMM, IMAG, IMAGERY INTERPRETATION MET, RADIAC, RDR, LASER INTEL, EW, CMD/CTRL, PWR SOURCES, RPV, GND&SCTY SENSORS SYS/EQUIP INCL EMC, EMI, EMV, ECM, ECCM, TEMPEST AND INTRA/INTEROPERABILITY ANAL AS REQ. TECHNIQUES INCL BENCH AND FLD TEST W/ACCESS TO EXTENSIVE REAL EST, MATH MDL AND SIM FACS INCL: EM, CLIMATIC/STRUCT ENVIRON, INSTRUMENTED SPACE POS RG (3 FPS-16/CAPRI), TEMPEST, C3I SYS TEST INCL A REALISTIC EM BATTLEFIELD, ANTENNA PATTERN, ELECTRO-OPT AND VARIOUS ENVIRON FACILITIES INCL NVC, PERFORM RELIABILITY, AVAILABILITY AND MAINTAINABILITY (INCLUDE MAINT MANUALS, REPAIR PARTS, SPECIAL TOOLS), SAFETY AND HFE TEST, CONDUCT/PARTICIPATE IN RELATED DOCTRINAL AND CONCEPT STUDIES, AND TEST FOR ARMY, OTHER SERVICES AND DOD AGENCIES.

INSTALLATION: ELECTRONIC WARFARE LABORATORY

FT. MONMOUTH, N.J.

DIR. MR. MAX ADLER

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	92.926	117.116
TOTAL PROCUREMENT	65.011	72.374
TOTAL O&M	12.500	4.420
TOTAL OTHER	0.000	0.000
TOTAL ANNUAL LAB	170.437	193.910
TOTAL INHOUSE	31.049	37.399
TOTAL INHOUSE RDT&E	22.855	32.803
ANNUAL OPERATING COST	3.500	3.700

PERSONNEL	PERSONNEL DATA (END OF FY 1983)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	84	1	75	9
CIVILIAN	403	6	206	197
TOTAL	487	7	281	206

ACRES	SPACE AND PROPERTY				COST (MILLION \$)	
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
325	163.877	26.617	37.314	227.808	6.078	55.580

#### ...MISSION

RESEARCH, DEVELOPMENT, INITIAL ACQUISITION, AND FIRST FIELDING OF NON-COMMUNICATIONS AND SELECTED COMMUNICATIONS EQUIPMENT. DEVELOPMENT OF ELECTRONIC COUNTER-COUNTERMEASURES RECOMMENDATIONS AND TECHNIQUES.

#### ...CURRENT IMPORTANT PROGRAMS

PROD OF SIGINT EQPT, E.G., QUICK LOOK, GUARDRAIL, TEAMPACK  
DEVELOP ECM AND WARNING EQPT FOR SELF PROTECTION OF COMBAT VEHICLE.  
EW VULN INVESTIGATIONS OF MISSILE SYS E.G., PATRIOT, ROLAND AND DIVAD.  
DEVELOPMENT, INITIAL ACQUISIT, FIRST FLDING EW AND RELATED INTL MATERIAL  
DEV EW SYS TO ENHANCE EFFECT AND SURVIV AIR DEFENSE ART UNITS E.G. ADEWS.

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

ELECTRONIC INTELLIGENCE (ELINT) ANECHOIC CHAMBER.  
SIMULATED ECM TECHNIQUES EVALUATOR (SECTER).  
ELECTRO-OPTICAL COUNTERMEASURES (EOCM) SIMULATOR.  
EOCCM SIMULATOR.  
INFRARED MEASUREMENTS AND DATA REDUCTION FACILITY.  
BIG CROW.  
MORILE ELECTRONIC WARFARE VULNERABILITY/ECCM TEST VAN.  
EARLE WAYSIDE TEST SITE.  
GRAPHICS ANALYSIS SYSTEM (OMEGA).  
SIMULATED ELECTRONIC COUNTER-COUNTERMEASURES TECHNIQUE EVALUATOR.  
ULTRAVIOLET/INFRARED (UV/IR) SCENE GENERATOR.

INSTALLATION: ELECTRONICS TECHNOLOGY AND DEVICES LAB

FT. MONMOUTH, N.J.

DIR. DR. C. G. THORNTON

TECH. DIR. MR. ROBERT G. LAUTTMAN

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	68.325	80.970
TOTAL PROCUREMENT	5.575	1.898
TOTAL O&M	0.705	0.784
TOTAL OTHER	0.000	0.000
TOTAL ANNUAL LAB	74.685	83.652
TOTAL INHOUSE	19.962	22.735
TOTAL INHOUSE RDT&E	17.682	20.341
ANNUAL OPERATING COST	5.237	7.069

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	1	0	1	0
CIVILIAN	291	40	184	107
TOTAL	292	40	185	107

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
0	81.909	5.537	4.467	91.913	0.000	14.000

...MISSION

TO DEV ESSENTL BASE IN ELECTRONICS TECH & DEVICES CONSISTNT WITH NEXT GEN-  
RATN ARMY SYS OPERATNL REQMTS. TO THIS END, AN ELECTRONICS-ORIENTED APPL  
R&D PROG IS PURSUED, FOCUSING ON CRITICAL BARRIER DEVICES & MATRL PROBLMS  
THAT INHIBIT UPGRADING EXISTING & DEV NEW ARMY SYSTEMS.

...CURRENT IMPORTANT PROGRAMS

MW DEVICES & PULSERS FOR TARGET LOC & IDENT THRU SMOKE & FOG  
SIG PROC DEVICES TO PERMIT NONAMMABLE COMMO & DEEP BATTLEFLD ASSMNT  
PULSE POWER SOURCES FOR DIRECT BEAM WEAPONS & LASER DESIGNATORS  
LIGHTWT, EFFICIENT PORTABLE POWER FOR SESIGNATORS, NV & C/E SYSTEMS  
INTELLIGENT, INTERACTIVE TERMINALS & DISPLAY DEVICES FOR TACTICALS OPS.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

ADVANCED RESRCH FACIL'S SUCH AS MBE SYSTEM, LEBES E-BEAM LITHOGRAPHIC  
SYSTEM. ISS/SIMS, CADD & AUGER ELECTRON SPECTROSCOPY ARE AVAIL FOR PER-  
FORMING ON PREP, PROPERTIES & CONTRL OF ELEC MATERIALS & ON ELEC  
PARTS, DEVICES IC'S & ASSEMBLIES. AREAS OF LAB EXPERTISE INCL: COMPL  
DESIGN, FABRIC & TESTING OF IC'S, HYBRID CIRCUIT ASSEMBLIES, SEMICONDC-  
TOR DEVICES & CIRCUITS, SURFACE ACOUSTIC WAVE DEVICES, ELECTRON TUBES,  
DISPLAY DEVICES, PRIMARY, SECONDARY & SPEC PURPOSE PWR SOURCES, ELECTRO-  
CHEM RESEARCH CHARACTERIZATION OF ELEC MATERIALS, QUICK TURNAROUND  
CUSTOMIZED & FABRIC OF LSI ARRAYS ARE AVAIL TO CIRCUIT & SYSTEM DE-  
SIGNERS IN OTHER ARMY LABS. LAB ALSO PROVIDES ARMY CUSTOMERS WITH EXPRT  
SERVICES INCL DIRECT R&D DEV, SUPPORT, CONSULTATION & DIRECT PARTICIPA-  
TION IN SYSTEM DEV.

INSTALLATION: ENGINEER TOPOGRAPHIC LABORATORIES

FT. BELVOIR, VA.

CDR. COL. EDWARD K. WINTZ

TECH. DIR. MR. WALTER E. BOGE

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	42.883	49.576
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	2.739	2.580
TOTAL OTHER	0.261	0.270
TOTAL ANNUAL LAB	45.883	52.426
TOTAL INHOUSE	12.990	14.426
TOTAL INHOUSE RDT&E	10.983	12.242
ANNUAL OPERATING COST	3.575	3.700

PERSONNEL	PERSONNEL DATA (END OF FY 1983)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	14	1	8	6
CIVILIAN	286	18	169	117
TOTAL	300	19	177	123

ACRES	SPACE AND PROPERTY				COST (MILLION \$)	
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
33	90.722	7.000	13.300	111.022	6.000	12.448

#### ...MISSION

RESEARCH AND DEVELOPMENT IN TOPOGRAPHIC SCIENCES, MAPPING, POINT POSITIONING, AND MILITARY GEOGRAPHIC INFORMATION, OPERATIONAL SUPPORT, TERRAIN ANALYSIS, AND SCIENTIFIC/ADVISORY SERVICES, REMOTE SENSING, COMPUTER TECHNOLOGY, AND ENVIRONMENTAL EFFECTS DATA.

#### ...CURRENT IMPORTANT PROGRAMS

SUPPORT TO THE ARMY SPACE PROGRAM  
DIGITAL TOPOGRAPHIC SUPPORT SYSTEM  
MODULAR AZIMUTH AND POSITIONING SYSTEM  
QUICK RESPONSE MULTICOLOR PRINTER  
ARTIFICIAL INTELLIGENCE/ROBOTICS

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

FACILITIES INCLUDE A CARTOGRAPHIC LABORATORY TO STUDY THE PROBLEMS ASSOCIATED WITH HANDLING DIGITAL CARTOGRAPHIC DATA, A DIGITAL-IMAGE PROCESSING LABORATORY TO STUDY THE MANIPULATION AND ENHANCEMENT OF TERRAIN IMAGERY FOR OBTAINING MAPPING AND GEOGRAPHIC DATA, COMPUTER ASSISTED PHOTO-INTERPRETATION STATION FOR EXPERIMENTAL EXTRACTION OF TERRAIN FEATURES, AND AN ARTIFICIAL INTELLIGENCE TEST BED FOR USE IN TERRAIN FEATURE EXTRACTION AND EXPLOITATION EXPERIMENTS. COMPUTATIONAL EQUIPMENT INCLUDES THE CDC CYBER 170/730, GOODYEAR STARAN S-1000, DEC FDP 1150 AND PDP 1170 AND DEC VAX MODELS 780 AND 750. OTHER SPECIALIZED EQUIPMENT INCLUDE A COMIAL, PDS DIGITAL AUTOMATED MICRODENSITOMETERS, AND PRECISION MENSURATION EQUIPMENT.

INSTALLATION: ENGINEER WATERWAYS EXPERIMENT STATION

VICKSBURG, MS.

CDR./DIR. COL TILFORD C. CREEL TECH. DIR. MR. F. R. BROWN

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	29.329	33.740
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.848	1.400
TOTAL OTHER	61.573	63.560
TOTAL ANNUAL LAB	91.750	98.700
TOTAL INHOUSE	77.073	82.270
TOTAL INHOUSE RDT&E	25.647	28.340
ANNUAL OPERATING COST	7.880	9.900

PERSONNEL DATA (END OF FY. 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	23	1	23	0
CIVILIAN	1538	101	590	948
TOTAL	1561	102	613	948

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
951	1739.308	334.925	168.824	2243.057	31.259	44.996

...MISSION

MIL.&CIV FUNDED RSCH,DEV&INVES IN HYD,ECOLOGY, COASTAL ENGR. PAVEMENTS, SOIL,CONC.,EXPLO WPN EFF,EXPLO EXCAVATION,VEH MOBILITY & ENVIRONMENTAL ASPECTS OF MIL OPERATIONS. OPERATE TECH LIBRARY&GOVERNMENT CEMENT POZZO-LAN TEST PROGRAM. SERVES CE,DARCOM,DNA,AF,NAVY,DOE,EPA & OTHER AGENCIES.

...CURRENT IMPORTANT PROGRAMS

HYD&MATH MODELING TO SOLVE RIVER,TIDAL,WIND-WAVE,ECOLOGICAL&STRUC.PROBS. RSCH ON VEH MOBILITY,REMOTE SENSING,ENVIR IMPACT,&EARTHQUAKE DESGN CRIT. NUC&HE RSCH TO DEV CRIT FOR DESGN OF PROTECT.STRUC,BARRIERS&EXCAVATIONS. RSCH&DEV OF NEW&IMPROVED ENG DESGN CRIT FOR ROADS,STOR AREAS,&AIRFIELDS. RSCH&DEV OF CEMENTITIOUS MATLS AND RSCH OF MASS AND STRUCTURAL CONCRETE.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

CAPABLE OF PERF GEN INVEST IN FLD OF HYD,SOIL MECH,CONCRETE,MOBILITY OF MIL VEH,EXPLO EFF,ECOLOGY,COASTAL ENGINEERING & DEV OF STRUCT & PAVEMENT DESIGN CRIT BY BASIC & APP RSCH; CAPABLE OF DEV METHODS&TECHNOLOGY FOR TESTING MATLS&EQUIP IN SUPPORT OF THE CE MISSION. WES RESERVATION CON-TAINS BLDGS,TEST SITES,SPECIAL AND OTHER PLANT SUPPORT EQUIP, TEST SITES &FAC FOR SPECIAL PURPOSES ARE MAINT IN OTHER AREAS ON PERM./TEMP BASIS. FAC. INCL. FLUMES OF DIFF TYPES&SIZES, WAVE&TIDE GENERATORS. WELL EQUIP-ED SOILS, CONC, CHEM, CALIB, ELEC&TEMP CONTROLLED ENVIRONMENTAL AND LYM-NOLOGICAL LABS, X-RAY DIFFRACTION & SPECTROSCOPY EQUIP, SMALL AND LARGE BLAST LOAD GENERATORS,200K DYNAMIC LOADER, MOBILITY RSCH FAC, SINGLE AND MULTIPLE WHEEL LOAD CARTS,SURFACE BLAST EFF FAC,HIGH&LOW FREQ VIBRATORS, ELECTRONBEAM MICROSCOPE, LARGE SCALE COMPUTER FAC AND TECH LIBRARY.

INSTALLATION: FIELD ARTILLERY BOARD

FT. SILL, OK.

PRES. COL. C. S. NOBELS

TECH. DIR. MR. JASPER GRIGG

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	2.114	2.852
TOTAL PROCUREMENT	0.059	0.007
TOTAL O&M	0.089	2.870
TOTAL OTHER	3.205	3.262
TOTAL ANNUAL LAB	5.467	8.991
TOTAL INHOUSE	5.467	8.991
TOTAL INHOUSE RDT&E	2.114	2.852
ANNUAL OPERATING COST	0.325	0.325

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	131	0	36	95
CIVILIAN	42	0	5	37
TOTAL	173	0	41	132

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
0	13.790	35.340	17.209	66.339	0.000	8.107

...MISSION

PLAN CONDUCT AND REPORT ON OT I OT II AND OTHER USER-TYPE TESTS  
PARTICIPATE IN DT I AND DT II AS DIRECTED  
PROVIDE ADVICE TO PROPONENT AGENCIES AND DEVELOPERS  
CONDUCT OTHER TESTS AND EVALUATIONS AS DIRECTED BY TRADOC

...CURRENT IMPORTANT PROGRAMS

OPERATIONAL TEST II TACFIRE VERSION V  
OPERATIONAL TEST II M109E4 HELP PIP  
OPERATIONAL TEST II TACFIRE VERSION VI  
OPERATIONAL TEST II XM40 PROTECTIVE MASK  
OPERATIONAL TEST II BCS SIMULATOR TRAINER.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

TWO MET STATIONS  
TEST ITEMS ADDITIONAL SUPPORT IS OBTAINED FROM USAFACFS WHEN NEEDED.

INSTALLATION: FIRE CONTROL & SMALL CAL. WPNS SYSTS LAB DOVER, N.J.

CDR. COL R. R. ROSS

DEP. DIR. MR. D. G. ADAMS

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	40.830	41.000
TOTAL PROCUREMENT	52.756	59.600
TOTAL O&M	10.505	13.209
TOTAL OTHER	0.000	0.000
TOTAL ANNUAL LAB	104.091	113.800
TOTAL INHOUSE	83.676	89.600
TOTAL INHOUSE RDT&E	27.812	28.000
ANNUAL OPERATING COST	21.025	21.750

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	14	0	14	0
CIVILIAN	650	28	415	235
TOTAL	664	28	429	235

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
6	167.247	103.974	4.576	275.797	8.305	26.060

...MISSION

ACCOMPLISH EXPLORATORY RESEARCH, ADVANCED AND ENGINEERING DEVELOPMENT LIFE CYCLE TECH RESPONSIBILITY FOR FIRE CONTROL AND ALL WEAPON SYSTEMS, AMMUNITION, AUXILIARY ITEMS THROUGH 40MM CAL. FIRE CONTROL INCLUDES ALL COMBAT VEHICLES, FIELD ARTILLERY, HELICOPTERS, AIR DEFENSE AND INFANTRY

...CURRENT IMPORTANT PROGRAMS

JOINT SERVICES SMALL ARMS PROGRAM JSSAP  
LONG ROD PENETRATOR  
RSCH SM CAL ARM  
SGT YORK AIR DEFENSE GUN SYSTEM FORMERLY DIVADS SUPPORT  
RSCH SM CAL AND FC TECH

...FUNCTIONS/EQUIPMENT/CAPABILITIES

LABORATORY CONDUCTS RESEARCH/EXPLORATORY, ADVANCED AND ENGINEERING DEVELOPMENT IN SMALL CALIBER WEAPON SYSTEMS AND FIRE CONTROL SYSTEMS. IT MAINTAINS TEST BED FACILITIES TO EVALUATE SYSTEMS IN AREAS OF FIRE CONTROL, AIR DEFENSE AND COMBAT VEHICLES. LAB HAS CAPABILITY FOR DESIGN AND EVALUATION OF OPTICAL, ELECTRO-OPTICAL AND ELECTROMAGNETIC SYSTEMS, SIGHTING DEVICES, DIGITAL AND ANALOG SIGNAL PROCESSORS, GUN/TURRET STABILIZATION AND CONTROL SYSTEMS, SMALL CALIBER WEAPONS INCLUDING AUTOMATIC CANNONS, WEAPON MECHANISMS, MOUNTS, PROJECTILES, PENETRATORS, SHAPED CHARGE LINERS, PROPELLANTS, PRIMERS, CARTRIDGE CASES, METAL AND PLASTIC MATERIALS AND ADHESIVES, AND MANUFACTURING TECHNOLOGY. JOINT SERVICE SMALL ARMS PROGRAM HAS RESPONSIBILITY FOR ALL SMALL ARMS CONVENTIONAL AND SPECIAL WEAPONS SYSTEMS FOR ALL USERS.



INSTALLATION: HARRY DIAMOND LABORATORIES

WASHINGTON, D.C.

CDR. COL ALLAN R. BURKE

TECH. DIR. DR. WILLIAM W. CARTER

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	68.872	71.555
TOTAL PROCUREMENT	49.882	48.140
TOTAL C&M	8.543	9.380
TOTAL OTHER	6.888	7.222
TOTAL ANNUAL LAB	134.185	136.297
TOTAL INHOUSE	62.486	63.228
TOTAL INHOUSE RDT&E	37.426	39.293
ANNUAL OPERATING COST	15.972	17.485

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	6	0	6	0
CIVILIAN	1169	48	862	807
TOTAL	1175	48	868	807

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
2316	507.829	112.019	1148.840	1768.688	53.557	46.754

...MISSION

MISSION: TECHNOLOGY & SYSTEMS, ELECTRONIC FUZES, NUCLEAR WEAPONS EFFECTS  
RADAR TECHNOLOGY BASE, SIMULATORS, CM/CCM, FLUIDICS, SPEC COMPONENTS,  
MATERIALS, VISTA TECHNOLOGY

...CURRENT IMPORTANT PROGRAMS

CURRENT SIGNIFICANT PROGRAMS: XMS18E1 PATRIOT R&D ON NWE AND ELECTRONICS  
M445 FUZE (MLRS), XM749/M735 FUZES (NUC ARTY), M782 FUZE (ARTY), RADAR TECH  
BASE, MODULAR RADAR, BISTATIC RADAR, EXPENDABLE JAMMERS, VISTA SIGNAL PROC.  
AFLUIDIC NAVIGATOR, COMBAT INFORMATION PROCESSOR, EMP ANALYSIS, SPEC PURP  
RADARS, HIGH POWER MICROWAVE, SIMULATORS, CM/CCM ANALYSIS, ARM/CM PROGRAM

...FUNCTIONS/EQUIPMENT/CAPABILITIES

MAJOR EQUIPMENT AND FACILITIES:

NUCLEAR FACILITIES: GAMMA RAY SIMULATOR (AURORA), HIGH INTENSITY FLASH  
X-RAY (HIFX), COBALT 60, ELECTROMAGNETIC PULSE SIMULATORS  
ELECTRONIC DESIGN FACILITIES: THICK FILM HYBRID CIRCUIT FACILITIES,  
MICROWAVE ANECHOIC CHAMBERS, MICROELECTRONICS FACILITY, ELECTRONICS  
FABRICATION SHOP, AUTOMATED CIRCUIT BOARD LAYOUT/FABRICATION CAPABILITY.  
FUZING FACILITIES: ARTILLERY SIMULATORS, ENVIRONMENTAL TESTING, BLOSSOM  
POINT TEST AREA  
GENERAL PURPOSE FACILITIES: FULL CAPABILITY SHOPS, TWO IBM 370 SERIES  
COMPUTERS; VAX, PRIME AND OTHER MINICOMPUTERS; AUTOMATED DRAFTING  
FACILITIES

DIR. DR. JOHN D. WEISZ

## PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	14.977	15.008
TOTAL PROCUREMENT	0.428	0.400
TOTAL O&M	2.760	1.250
TOTAL OTHER	0.564	0.550
TOTAL ANNUAL LAB	18.729	17.208
TOTAL INHOUSE	14.378	14.136
TOTAL INHOUSE RDT&E	10.998	12.186
ANNUAL OPERATING COST	1.639	2.143

## PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	35	1	10	25
CIVILIAN	179	18	117	62
TOTAL	214	19	127	87

## SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
72	111.524	7.056	21.400	139.980	8.112	8.507

## ...MISSION

CONDUCTS FUNDAMENTAL AND APPLIED RESEARCH IN HUMAN FACTORS ENGINEERING  
 PROVIDES DIRECT DESIGN SUPPORT TO ALL MATERIEL DEVELOPMENT PROGRAMS SPON-  
 SORED BY DARCOM. NINETEEN DETACHMENTS AND/OR LIAISON REPRESENTATIVES  
 HAVE BEEN ESTABLISHED AT DARCOM COMMANDS, CRTIC AND TRADOC CTRS/SCHOOLS.

## ...CURRENT IMPORTANT PROGRAMS

AUTOMATION/ARTIFICIAL INTELLIGENCE/ROBOTICS  
 INDIVIDUAL SOLDIER PROTECTIVE CLOTHING/EQUIPMENT  
 BATTLEFIELD ROBOTIC AMMUNITION SUPPLY SYSTEM  
 COMMAND CONTROL COMMUNICATIONS INTERFACE  
 FIRE CONTROL RESEARCH.

## ...FUNCTIONS/EQUIPMENT/CAPABILITIES

COMMAND POST EXERCISE FACILITY  
 ACE COMPUTER FACILITY  
 FIRE CONTROL RESEARCH FACILITY  
 DATA ACQUISITION AND BIOTELEMETRY SYSTEM  
 GAT 2M HELICOPTER SIMULATOR  
 ACOUSTICAL AND ANECHOIC CHAMBER REVERBERANT ROOM  
 HELFAST LOGISTICS TESTING FACILITIES  
 EYE MOVEMENT MEASURING DEVICE  
 SMALL ARMS TEST FIRING RANGE  
 WOOD AND METAL WORKING TEST SUPPORT CAPABILITY  
 HUMAN FACTORS DATA BANK  
 COMMAND CONTROL SIMULATOR SYSTEM

INSTALLATION: INFANTRY BOARD

FT. BENNING, GA.

CDR. COL. RICHARD A. HUMPHREY

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	2.303	2.573
TOTAL PROCUREMENT	0.223	0.143
TOTAL O&M	0.545	0.125
TOTAL OTHER	2.685	2.928
TOTAL ANNUAL LAB	5.756	5.769
TOTAL INHOUSE	5.756	5.769
TOTAL INHOUSE RDT&E	2.303	2.573
ANNUAL OPERATING COST	1.564	1.828

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	124	0	2	122
CIVILIAN	57	0	7	50
TOTAL	181	0	9	172

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1	0.000	32.203	32.885	65.088	3.000	1.102

...MISSION

PLAN CONDUCT REPORT ON OPERATIONAL TESTS 1/2/3, FORCE DEVELOPMENT TESTS  
OTHER TESTS OF EQUIPMENT & ANCILLARY ITEMS TO BE USED BY INFANTRY UNITS  
FOR COMMAND, CONTROL, FIREPOWER, TARGET ACQUISITION, GROUND SURVEIL-  
LANCE, FIRE CONTROL GROUND MOBILITY & TRNG & CHEMICAL/BIOLOGICAL EQUIP.

...CURRENT IMPORTANT PROGRAMS

HMMV STATION-MK 19 MACHINEGUN  
HIT PROBABILITY, 9MM PISTOLS  
EXTENDED COLD/WET WEATHER CLOTHING SYSTEM  
NIGHT VISION GOGGLES  
81MM SMOKE CARTRIDGE XM19.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

AUTOMATED, COMPUTERIZED AUTOMATIC & SMALL ARMS WEAPONS RANGE  
CLOTHING & EQUIPMENT TEST FACILITY  
MANNED EVASIVE TARGET TANKS  
NOVA 312 COMPUTER CAPABILITIES.

INSTALLATION: INSTITUTE OF DENTAL RESEARCH

WASHINGTON, D.C.

CDR. COL. THOMAS P. SWEENEY

DEP. FOR RES. DR. GINO BATTISTONE

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	2.526	3.215
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.150	0.076
TOTAL OTHER	1.803	2.842
TOTAL ANNUAL LAB	4.479	6.133
TOTAL INHOUSE	3.735	5.116
TOTAL INHOUSE RDT&E	1.782	2.198
ANNUAL OPERATING COST	0.861	1.148

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	82	1	24	58
CIVILIAN	21	2	11	10
TOTAL	103	3	35	68

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
4	9.852	5.696	14.153	29.701	2.548	2.702

...MISSION

DEVELOP TECHNIQUES TO TREAT WAR RELATED MAXILLOFACIAL INJURIES AND DENTAL DISEASES. PREVENTION AND CONTROL OF DENTAL DISEASE. TO PROVIDE DENTAL RESIDENCY PROGRAMS. TO PROVIDE A DENTAL CLINIC FOR RESEARCH AND TRAINING.

...CURRENT IMPORTANT PROGRAMS

BIODEGRADABLE MATERIALS FOR LONG TERM SLOW RELEASE AND ORGAN REPLACEMENT  
USE OF SALIVA FOR DETECTING EXPOSURE TO CHEMICAL AGENTS IN THE FIELD  
R&D OF NEW AND IMPROVED DENTAL MATERIALS FOR MILITARY USE WORLD-WIDE  
STUDIES ON METHODS OF IMPROVING COMBAT CONTAMINATED WOUND HEALING  
STUDIES FOR IMPROVING METHODS OF CONTROLLING INFECTIONS IN COMBAT WOUNDS

...FUNCTIONS/EQUIPMENT/CAPABILITIES

TEST AND EVALUATE THE PHYSICAL, CHEMICAL AND MECHANICAL PROPERTIES OF DENTAL METALS, ALLOYS, PLASTICS AND POLYMERS. EVALUATE CHANGES DUE TO ENVIRONMENT AND TRANSPORTATION. CONDUCT RESEARCH IN MICROBIOLOGY, CHEMISTRY, BIOCHEMISTRY, IMMUNOLOGY, RADIATION EFFECTS, PHARMACOLOGY, PHYSIOLOGY, HISTOLOGY & PATHOLOGY AS THEY RELATE TO DENTAL MILITARY RES. CONDUCT EPIDEMIOLOGICAL STUDIES ON TRAUMA, DISEASE, MAN MACHINE INTERFACE. TRAUMA AND FIELD DENTAL EMERGENCIES. STUDY MEANS OF PREVENTING ORAL DISEASE. STUDY THE PSYCHOLOGY OF DENTAL TREATMENT ACCEPTANCE. STUDY NEW MATERIALS AND METHODS MORE CLINICALLY EFFECTIVE IN THE FIELD. DEVELOP AND EVALUATE NEW TECHNIQUES AND NEW MATERIALS TO TREAT COMBAT WOUNDS AND TO TEST THESE IN VARIOUS BIOLOGIC MEDIA. DISSEMINATE AS PRACTICAL ALL INFORMATION TO THE FIELD.

INSTALLATION: INSTITUTE OF SURGICAL RESEARCH

FT. SAM HOUSTON, TX.

CDR. COL. BASIL A. PRUITT

TECH. DIR. DR. ARTHUR D. MASON

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	4.144	3.400
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	4.448	4.418
TOTAL ANNUAL LAB	8.592	7.818
TOTAL INHOUSE	7.834	7.788
TOTAL INHOUSE RDT&E	3.386	3.370
ANNUAL OPERATING COST	1.230	1.450

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	157	16	46	111
CIVILIAN	79	4	31	48
TOTAL	236	20	77	159

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1	26.424	1.800	22.400	50.624	4.340	4.300

...MISSION

INVESTIGATES PROBLEMS OF MECHANICAL AND THERMAL INJ THEIR COMPLICATIONS.  
 CARES FOR PATIENTS WITH SUCH INJURIES.  
 TEACHES AND TRAINS OTHER PERSONNEL IN THE MANAGEMENT OF SUCH PATIENTS.  
 CONDUCTS INVESTIGATIVE STUDIES AT BOTH THE BASIC AND CLINICAL LEVELS.

...CURRENT IMPORTANT PROGRAMS

BURN INFECTION, TREATMENT & PREVENTION.  
 METABOLISM & NUTRITIONAL EFFECTS OF BURN INJURY IN SOLDIERS.  
 INFECTION & MICROBIOLOGIC SURVEILLANCE OF TROOPS WITH THERMAL INJURY.  
 ALTERATION OF HOST RESISTANCE IN BURNED SOLDIERS.  
 ASSESSMENT OF L-TRIiodOTHYRONINE THERAPY IN THERMALLY INJURED PATIENTS.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

OPERATES 40 BEDS FOR SERIOUSLY BURNED AND INJURED PATIENTS. PROVIDES  
 CLINICAL LABORATORY SUPPORT AND RESEARCH CAPABILITIES IN THE FIELDS OF  
 PATHOLOGY, MICROBIOLOGY, EXPERIMENTAL SURGERY, & BIOCHEMISTRY. MAINTAINS  
 AN ANIMAL COLONY, ELECTRONIC SHOP, MACHINE SHOP, SURGICAL LIBRARY, AND  
 METABOLIC CHAMBER.  
 PROVIDES CLINICAL AND LABORATORY SUPPORT AND RESEARCH CAPABILITY IN THE  
 FIELDS OF PATHOLOGY, INCLUDING USE OF ELECTRON MICROSCOPE, MICROBIOLOGY,  
 EXPERIMENTAL SURGERY, AND BIOCHEMISTRY. MAINTAINS AN ANIMAL COLONY,  
 ELECTRONIC SHOP, SURGICAL LIBRARY, METABOLIC CHAMBER, AND COMPUTER FA-  
 CILITY.

PRES. COL. JOHN F. PHELPS

TECH. DIR. MR. PHILLIP E. WRALSTAD

## PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	5.546	2.619
TOTAL PROCUREMENT	2.154	0.000
TOTAL O&M	0.232	0.156
TOTAL OTHER	0.000	0.000
TOTAL ANNUAL LAB	7.932	2.775
TOTAL INHOUSE	2.311	1.141
TOTAL INHOUSE RDT&E	2.218	1.047
ANNUAL OPERATING COST	0.791	0.855

## PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	87	0	123	36
CIVILIAN	26	2	11	15
TOTAL	113	2	134	51

## SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
10	4.000	6.627	21.667	32.294	0.616	5.709

## ...MISSION

PLAN, CONDUCT AND REPORT ON OT I, II, III AND OTHER USER TYPE TESTS OF TACTICAL INTEL + SECURITY MATERIAL. PARTICIPATE IN DT I, II + III TESTS AS DIRECTED. CONDUCT VULNERABILITY + OTHER CUSTOMER TESTS AS DIRECTED.

## ...CURRENT IMPORTANT PROGRAMS

AN/ALQ-162(V)2 CONTINUOUS WAVE JAMMER 840TN922  
 AN/GDQ-3 RECORDING RADIATION MONITOR 840TN961  
 AN/MSQ-103A NETTING (TEAMPACK) 840TN873A  
 AN/TRQ-32(V1) RADIO RECEIVING 840TN1070  
 ULTRA HIGH FREQUENCY ELECTRONIC COUNTERMEASURES 83CEP156.

## ...FUNCTIONS/EQUIPMENT/CAPABILITIES

EW MONITORING FAC: TRANSPORTABLE 30 FT VAN; RECEIVE 10KHZ TO 40GHZ; DF 20 MHZ TO 40GHZ; TAPE RECORDERS, SPECTRUM ANALYZERS AND OSCILLOSCOPES.  
 ANALYSIS EQP. VULNERABILITY MOBILE TRANSMITTER "A" VAN: TRANSPORTABLE 40 FT VAN; RECEIVE 900KHZ TO 1GHZ; JAM 10KHZ TO 1GHZ WITH 1000W TRANSMITTERS;  
 ANALYSIS EQP. VULNERABILITY MOBILE TRANSMITTER "B" VAN: TRANSPORTABLE 40 FT VAN; RECEIVE 1GHZ TO 40GHZ; JAM 1GHZ TO 40GHZ WITH 200W TRANSMITTERS;  
 ANALYSIS EQP. NON-COMM EMITTER SIMULATOR: 8.5 TO 17.0GHZ; 200W OUTPUT SIMULATING 20 THREAT RADARS; COMPUTER CONTROL VIA DATA LINK; TRANSPORTABLE; REPROGRAMABLE. COMM EMITTER SIMULATOR: 2 TO 500MHZ; 20W OUTPUT SIMULATING 50 THREAT COMM TYPES; CONTROL THRU SYS MICROPROCESSOR, RECORDER OR DATA WILL HOUSE REALTIME RANGE CONTROL SYS FAC AND DATA PROCESSING.

INSTALLATION: KWAJALEIN MISSILE RANGE, MARSHALL ISLANDS

APO SAN FRANCISCO

DIR. COL. W. A. SPIN

DEPUTY DIR. MR. H. R. BRASWELL

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	176.276	164.985
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	1.695	7.400
TOTAL ANNUAL LAB	177.971	172.385
TOTAL INHOUSE	8.125	8.237
TOTAL INHOUSE RDT&E	6.430	6.457
ANNUAL OPERATING COST	0.610	0.680

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	27	0	19	8
CIVILIAN	102	1	56	46
TOTAL	129	1	75	54

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1361	0.000	207.012	2258.235	2465.247	237.550	246.723

...MISSION

PLAN MANAGE DIRECT CONTROL & COORDINATE OVERALL ACTIVITIES OF KWAJALEIN MISSILE RANGE FOR TECHNICAL & LOGISTICAL SUPPORT OF ON-SITE BMD R&D TEST TECHNICAL INSTRUMENTATION SUPPORT OF STRATEGIC OFFENSIVE WEAPON SYSTEM DEVELOPMENT & OPERATIONAL TEST. SPACE DATA COLLECTION & SURVEILLANCE

...CURRENT IMPORTANT PROGRAMS

BALLISTIC MISSILE DEFENSE BMD R&D TESTING  
USAF BMD ADVANCED STRATEGIC MISSILE SYSTEM R&D TESTING  
USAF SAC MINUTEMAN II & III OPERATIONAL TESTING  
USAF BMD PEACEKEEPER R&D TESTING  
SPACE DETECTION & TRACKING SYS & SPACE OBJECT IDENTIFICATION

...FUNCTIONS/EQUIPMENT/CAPABILITIES

ALCOR TRADEX ALTAIR & MILLIMETER WAVE RADARS, MULTISTATIC MEASUREMENT SYS, KREMS TO CONUS HIGH SPEED DATA LINK, 2AN/MPS 36, AN/FPQ18, AN/TPX42 2 SPLASH DETECTION RADARS, 3 RADOIS, 6 SUPER RADOTS, 8 BALLISTIC CAMERA 5 SPECTRAL CAMERAS PHOTO LAB, S-BAND TELEMETRY RECEIVING SYS INCL 8 AUTO TRACK ANTENNAS, 1 RELAY SYS, RECEIVE & RECORD SYS, DATA SEPARATION AND DISPLAY SYS, METEOROLOGICAL SYS, LAUNCH ORDNANCE FAC, TIMING/COUNTDOWN SYS FREQUENCY CONTROL & ANALYSIS SYS, INSTRUMENTATION CONTROL CENTER, AIR TRAFFIC CONTROL SYS INCL TACAN LOW FREQUENCY HOMING BEACON & AC COMMUNICATIONS, CLOSED CIRCUIT TV SYS, DATA REDUCTION FACILITY & INSTRUMENTATION SYS ACCURACY ANALYSIS CAPABILITY GROUND PORTION OF FLIGHT TERMINATION & CONTROL SYS, INSTRUMENTED TERMINAL AREA SUPPORT AIRCRAFT, DIVING & RECOVERY CAPABILITIES & RANGE SAFETY SYSTEM.

INSTALLATION: LARGE CALIBER WEAPONS SYSTEMS LAB

DOVER, N.J.

CDR. COL. J. E. BROWN

TECH. DIR. MR. H. L. GRUNDLER

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	120.064	114.430
TOTAL PROCUREMENT	57.196	56.220
TOTAL O&M	10.193	8.250
TOTAL OTHER	0.000	0.000
TOTAL ANNUAL LAB	187.453	178.900
TOTAL INHOUSE	133.167	125.620
TOTAL INHOUSE RDT&E	66.974	62.250
ANNUAL OPERATING COST	24.750	25.370

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	27	1	19	8
CIVILIAN	1734	82	1050	684
TOTAL	1761	83	1069	692

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
11	189.951	219.627	50.343	459.921	17.732	27.272

...MISSION

MAINTAIN A STRONG BASIC AND EXPLORATORY TECHNOLOGY BASE. DES AND RES WPNS SYS-GUN/AMMO, LARGER THAN 40MM FOR TANKS, ARTY, MORTAR, RECOILLESS GUNS, AIR DEFENSE, MINES AND DEMO SYS, EXPLOS AND WHDS. ENG SPT DURING PROCUREMENT, PRODUCTION AND FIELD USE. PREVENT TECHNOLOGICAL SUPRISE.

...CURRENT IMPORTANT PROGRAMS

SPT PM-CAWS DSWS, M509 AND M483 PROJ, M692 ADAM, XM718 RAM  
SPT PM-TANK MAIN 120MM AMMO/GUN  
SPT PM-NUCL PERSHING 2, XM785, XM753 8 INCH PROJ, XM266  
SCATTERABLE MINE SYSTEMS-MOPMS, GEMMS, GRATMS AND VOLCANO  
ARTILLERY-GUN PROPULSION INCL EM, CHG DSG, REDUCED WEAR & EROSION, & SADARM

...FUNCTIONS/EQUIPMENT/CAPABILITIES

DEVELOP NEW ITEMS. THE IGNITION, RHEOLOGY AND COMB. LAB WAS ACCEPTED AND IS OPERATIONAL. THE NEW ENERGETICS LAB WAS COMPLETED, ACCEPTED AND IS OPERATIONAL. FACILITIES AND EQUIPMENT RESOURCES ARE CONTAINED IN COMPLEX OF ENG AND LAB BLDGS  
15 ADMIN BLDGS, 32 LAB BLDGS AND 47 STORAGE BLDGS.



INSTALLATION: LETTERMAN ARMY INSTITUTE OF RESEARCH

PRESIDIO, S.F., CA.

CDR. COL. THOMAS F. ZUCK

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	12.242	17.027
TOTAL PROCUREMENT	0.041	0.000
TOTAL O&M	0.248	0.269
TOTAL OTHER	3.990	4.366
TOTAL ANNUAL LAB	16.521	21.662
TOTAL INHOUSE	13.065	15.494
TOTAL INHOUSE RDT&E	8.786	10.859
ANNUAL OPERATING COST	0.000	4.593

PERSONNEL	PERSONNEL DATA (END OF FY 1983)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	158	33	97	61
CIVILIAN	117	14	51	66
TOTAL	275	47	148	127

ACRES	SPACE AND PROPERTY				COST (MILLION \$)	
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
9	83.520	62.091	274.940	420.551	34.514	10.556

#### ...MISSION

SUPPORT CLINICAL INVESTIGATION PROJECTS  
RECOMMENDED BY CDR. LETTERMAN ARMY MEDICAL CENTER (LAMC). THE INSTITUTE  
ALSO PERFORMS OTHER MEDICAL RESEARCH ACTIVITIES AS DIRECTED BY THE CG,  
US ARMY MEDICAL RESEARCH AND DEVELOPMENT COMMAND.

#### ...CURRENT IMPORTANT PROGRAMS

PROVIDES A GENERAL MILITARY MEDICAL RESEARCH CAPABILITY AND CONDUCTS  
RESEARCH IN THE AREAS OF DERMAL PROTECTION AGAINST BIOLOGICAL, CHEMICAL,  
AND RADIOLOGICAL HAZARDS; BATTLEFIELD CASUALTY MANAGEMENT; EFFECTS OF  
MILITARY LASERS; EXPERIMENTAL PSYCHOLOGY; MILITARY TRAUMA AND RESUSCITA-  
TION; BLOOD PRESERVATION; CHRONIC MAMMALIAN TOXICOLOGY.

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

AT THE LAIR IS A MULTIDISCIPLINARY APPROACH TO THE PHYSIOLOGY OF ACUTE  
COMBAT INJURY, SKIN PHYSIOLOGY, AND REPELLENT SCIENCE BASE. THE 6.2 PRO-  
GRAM ADDRESSES MANAGEMENT OF WOUNDS FROM FIELDED AND ANTICIPATED WEAPONS  
SYSTEMS, ANTI-SHOCK DRUGS, BLOOD SUBSTITUTES AND PRESERVATION SYSTEMS,  
PREVENTION, DIAGNOSIS AND TREATMENT OF MILITARY LASER INJURIES, AND  
HEALTH EFFECTS OF LOW LEVEL LASER EXPOSURE. IN SUPPORT OF MEDICAL DE-  
FENSE AGAINST CHEMICAL WARFARE, THE PROGRAM ADDRESSES SKIN DECONTAMINA-  
TION TECHNOLOGY AND TOXICOLOGY ASSESSMENT OF ANTIDOTES AND DECONTAMINA-  
TION MATERIALS.

INSTALLATION: MATERIALS AND MECHANICS RESEARCH CENTER

WATERTOWN MA

DIR. DR. E. S. WRIGHT

CDR. COL. L. ROSS

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	40.722	29.840
TOTAL PROCUREMENT	0.050	2.515
TOTAL O&M	5.599	4.968
TOTAL OTHER	0.074	0.056
TOTAL ANNUAL LAB	46.445	37.379
TOTAL INHOUSE	24.495	20.445
TOTAL INHOUSE RDT&E	19.698	16.009
ANNUAL OPERATING COST	7.400	8.100

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	16	1	19	3
CIVILIAN	610	73	238	372
TOTAL	626	74	257	375

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
37.	352.000	88.261	48.375	488.636	15.294	21.919

...MISSION

MANAGE THE DARCOM STRUCTURAL MATERIALS AND MECHANICS PROGRAM AS LEAD LAB FOR MATERIALS, MECHANICS AND MATERIALS TESTING TECHNOLOGY. CONDUCT RESEARCH AT THE FOREFRONT OF TECHNOLOGY TO PROVIDE THE ADVANCED MATERIALS REQUIRED FOR PRESENT AND FUTURE ARMY WEAPONS SYSTEMS AT REASONABLE COSTS.

...CURRENT IMPORTANT PROGRAMS

METAL AND ORGANIC MATRIX COMPOSITES FOR LIGHTWEIGHT MATERIEL APPLICATION  
ADVANCED ARMOR AND ARMOR PENETRATOR MATERIALS INCLUDING LASER HARDENING  
STRUCTURAL INTEGRITY, NDT, AND LIFE PREDICTION/RELIABILITY MECHANICS  
CERAMICS FOR ELECTRO-OPTICAL, ENGINE, AND GUN TUBE APPLICATIONS  
MATERIALS PROCESSING AND CHARACTERIZATION: METALS ORGANICS AND CERAMICS

...FUNCTIONS/EQUIPMENT/CAPABILITIES

THE CENTER POSSESSES THE IN-HOUSE EXPERTISE & FACILITIES TO PERFORM R&D PROJECTS RANGING FROM THE SYNTHESIS OF NEW AND IMPROVED MATERIALS AND DESIGNS TO THE PROTOTYPE MANUFACTURE OF COMPONENTS FOR ARMY WEAPONS SYSTEMS. METALS PROCESSING EQUIPMENT INCLUDES CASTING, FORGING, ROLLING, HEAT TREATING, JOINING, PLATING, ISOSTATIC PRESSING, VACUUM ARC MELTING, AND MACHINING. CERAMIC PROCESSING EQUIP: SLIP CASTING, HOT PRESSING, SINTERING AND GRADIENT FURNACE CRYSTAL GROWTH. POLYMER/COMPOSIT PROCESSING EQUIPMENT: INJECTION MOLDING, LAMINATING, TAPE LAYUP, VACUUM FORMING, FILM FORMING AND ORIENTATION, FILAMENT WINDING, PULTRUSION, FOAM PROCESSING & PILOT POLYMER PRODUCTION. QC AND NDT EQUIPMENT: ULTRASONICS, XRAY & NEUTRON RADIOGRAPHY, SPECTROSCOPY, HOLOGRAPHY, CHEMICAL ANALYSIS, METALLOGRAPHY AND OPTICS.  
OTHER: U AND RE MACHINING, BALLISTIC RANGE AND POWDER CHARACTERIZATION.

INSTALLATION: MATERIEL SYSTEMS ANALYSIS ACTIVITY

ABERDN. PROV. GROUND, M

DIR. MR. KEITH A. MYERS

DEP. DIR. LT. COL. THOMAS T. MOXLEY

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	23.363	24.967
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	5.585	5.704
TOTAL OTHER	0.634	0.660
TOTAL ANNUAL LAB	29.582	31.331
TOTAL INHOUSE	22.291	23.681
TOTAL INHOUSE RDT&E	17.321	18.754
ANNUAL OPERATING COST	3.090	3.420

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	31	0	10	21
CIVILIAN	449	22	372	77
TOTAL	480	22	382	98

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
4	8.140	100.276	1.715	110.131	2.070	1.239

...MISSION

PROVIDES THE CENTRAL INDEPENDENT TECHNICAL CAPABILITY FOR DARCOM FOR THE CONDUCT OF MAJOR SYSTEMS ANALYSIS AND COST EFFECTIVENESS STUDIES, SERVES AS DARCOM LEAD ACTIVITY FOR SURVIVABILITY AND RELIABILITY, AVAILABILITY AND MAINTAINABILITY METHODOLOGY.

...CURRENT IMPORTANT PROGRAMS

TEST DESIGN: EVAL OF APPROX 60 SYSTEMS INCLUDING SGT YORK, 120MM GUN: AMMO, TCAC, MK19 40MM GRENADE MG, HIRSS, ESSS, AND CVCU FACE MASK. EXAMINE PERFORMANCE AND SURVIVABILITY OF FAMILY OF LIGHT HELICOPTERS. DEVELOP METHODOLOGIES: EVALUATE EFFECTIVENESS OF ADVANCED IFF SYSTEMS. PREPARE AIR-TO-SURFACE, SURFACE-TO-SURFACE AND ANTI-AIR WPNS EFF MANUALS

...FUNCTIONS/EQUIPMENT/CAPABILITIES

AMSAA MISSION CAPABILITIES INCLUDE, PERFORMING INDEPENDENT TEST DESIGN AND OVERALL EVALUATION FOR DECISIONS ON MAJOR, DESIGNATED NON-MAJOR AND SELECTED OTHER SYSTEMS; PROVIDING OVERVIEW OF LIFE CYCLE SURVEILLANCE PROGRAMS FOR MATERIEL SYSTEMS IN INVENTORY; PROVIDING WEAPONS SYSTEM EFFECTIVENESS ESTIMATES FOR COST AND OPERATIONAL EFFECTIVENESS ANALYSES; PROVIDING SYSTEMS ANALYSIS SUPPORT TO DARCOM MAJOR SUBORDINATE COMMANDS AND PROJECT/PRODUCT MANAGERS; MAINTAINING DIRECT CONTACT WITH ARMY MATERIEL USERS IN THE FIELD; SERVING AS THE DARCOM FIELD ACTIVITY FOR ADMINISTERING THE JOINT TECHNICAL COORDINATING GROUP FOR MUNITIONS EFFECTIVENESS JTCC/ME, AND PERFORMING LOGISTICS AND READINESS RELATED ANALYSIS.

INSTALLATION: MATERIEL TESTING DIRECTORATE

ABERDEEN PROV. GR., MD

CDR. COL. CHARLES W. BINNEY

ASSOC. DIR. MR. DONALD RESCH

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	57.210	60.071
TOTAL PROCUREMENT	41.744	43.831
TOTAL O&M	5.215	5.476
TOTAL OTHER	6.404	6.724
TOTAL ANNUAL LAB	110.573	116.102
TOTAL INHOUSE	104.415	109.636
TOTAL INHOUSE RDT&E	54.273	56.987
ANNUAL OPERATING COST	34.764	36.305

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	210	6	38	172
CIVILIAN	702	6	333	369
TOTAL	912	12	371	541

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
22865	720.999	4.351	248.742	974.092	22.176	44.865

...MISSION

PLAN, CONDUCT & RPT TESTS ON WPNS, WPN SYS, TRACKED & WHEELED VEH, FIRE CONTROL & TARGET ACQUISITION EQUIP, ITEMS OF AMMO & MUNITION COMPONENTS; TRP SPT EQUIP & AR PLATE FOR ALL DARCOM INSTLS & ACTIVITIES. PROVIDE SPT SVC TO APG ELEMENTS & SPT COMMANDS.

...CURRENT IMPORTANT PROGRAMS

SGT YORK AIR DEFENSE SYSTEM  
IMPROVED LIGHT ANTITANK/ASSAULT WEAPON  
BRADLEY FIGHTING VEHICLE SYSTEM  
ABRAMS TANK (M1)  
HIGH MOBILITY MULTIPURPOSE WHEELED VEHICLE (HMMWV).

...FUNCTIONS/EQUIPMENT/CAPABILITIES

TEST AREA 68700 ACRES. 22500M RANGE TO LAND IMPACT, 26000M RANGE TO WATER IMPACT. 41 MILES OF AUTO COURSES INCL 27 SPECIAL ENCR TEST CRS/OBSTACLE. VARIOUS TYPES OF ENVIRONMENT/COND EQUIP. SPECIAL CHAMBERS F/SUBJECTING EQUIP TO DUST, SALT SPRAY OR SOLAR RADN. ISOLATED VIBRATION TEST FAC WHICH PERMITS SHAKING EXPLO EQUIP SIMULTANEOUSLY W/TEMP COND FAC F/CONTROLLED TESTS OF ELEC CONTROL & GUID EQUIP. FREQ SOURCE WHICH PERMITS TESTING ALL TYPES OF MAT IN PRESENCE OF HIGH INTENSITY ELEC MAGNETIC RADN. SPECIAL FAC F/TEST OF AR PLATE. SPECIAL VEL & TGT EQUIP IS AVAIL F/OBSERVATION DURING RAPID FIRE OF RKT TRACK F/CONTROLLED TERMINAL BALLISTIC TESTS. FAC AVAIL F/TESTS OF SPECIAL ELEC & FIRE CONTROL EQUIP & RELATED SYS & COMPONENTS. PULSE RADN FAC AVAIL FOR USE IN RADN TEST OF NUCLEAR EFFECTS. SIMULATION REACTOR TECH & RADN PHYSICS.

INSTALLATION: MEDICAL BIOENGINEERING R&D LABORATORY

FT.DETRICK,MD.

CDR. COL THOMAS L. TRUDEAU

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	15.992	25.130
TOTAL PROCUREMENT	0.006	0.000
TOTAL O&M	0.047	0.039
TOTAL OTHER	1.035	1.044
TOTAL ANNUAL LAB	17.080	26.263
TOTAL INHOUSE	6.666	7.086
TOTAL INHOUSE RDT&E	5.578	5.953
ANNUAL OPERATING COST	2.036	2.328

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	33	2	25	8
CIVILIAN	103	17	47	56
TOTAL	136	19	72	64

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
5	45.193	27.300	34.108	106.601	3.588	3.549

...MISSION

CONDUCTS R&D ON MEDICAL DENTAL AND PEST MANAGEMENT MATERIEL  
PERFORMS R&D ON NEW DELIVERY SYSTEMS FOR INSECTICIDE DISPERSAL  
PERFORMS R&D ON MILITARILY UNIQUE POLLUTANTS FROM ARMY INDUSTRIAL OPER  
CONDUCTS R&D OF SOLDIER OCCUPATIONAL HEALTH HAZARDS

...CURRENT IMPORTANT PROGRAMS

THE FOLLOWING ITEMS WERE TYPE CLASSIFIED: TWO HELICOPTER SLUNG PESTICIDE  
DISPERSAL UNITS, A PORTABLE BACKPACK SPRAYER, AN ULTRA LOW VOLUME SPRAYER,  
FIELD DENTAL X-RAY APPARATUS AND A FIELD DENTAL X-RAY PROCESSOR  
HLTH EFF RSCH: SMOKES OBSC, WEAPON SYS, SYN FUEL, ENVIRO QUAL, FLD SAN/WATER  
DEVELOP ENVIRO QLTY & OCCUP HLTH CRITERIA ON MIL CHEMICALS

...FUNCTIONS/EQUIPMENT/CAPABILITIES

DESIGN, DEVELOP & FABRICATE PROTOTYPE & TEST MODELS OF MIL MED MAT  
PRODUCE LIMITED QUANTITIES OF MED MAT FOR URGENT MIL REQ  
DESIGN, DEVELOP & FABRICATE PEST MGT EQUIP AND SYSTEMS  
DESIGN, DEVELOP & FABRICATE PROTOTYPE AND TEST MODELS OF MIL DENTAL MAT  
PERFORM HEALTH HAZARD ASSESSMENT ON ARMY CHEMICALS  
PERFORM UNIT PROCESS ENGINEERING RSCH ON WASTEWATER IN SUPPORT OF FIELD  
ARMY AND OCCUP HEALTH AND ENVIRO QUALITY CRITERIA  
CONDUCTS HEALTH HAZARD ASSESSMENT FOR MATERIEL DEVELOPERS OF SMOKES  
OBSURANTS AND SYNFUELS; DEVICES STRATEGIES TO ELIMINATE EXPOSURE OR  
DEFINE CRITERIA FOR SAFE EXPOSURE STANDARDS.

INSTALLATION: MEDICAL R & D COMMAND

FT. DETRICK, MD.

CDR. MG GARRISON RAPMUND

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	12.118	15.917
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.307	0.352
TOTAL OTHER	2.739	2.949
TOTAL ANNUAL LAB	15.164	19.218
TOTAL INHOUSE	14.362	17.785
TOTAL INHOUSE RDT&E	11.316	14.484
ANNUAL OPERATING COST	4.000	4.190

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	61	29	55	6
CIVILIAN	140	1	2	138
TOTAL	201	30	57	144

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1	0.000	38.757	0.000	38.757	0.632	0.997

...MISSION

ADMINISTRATION AND COORDINATION OF THE ARMY MEDICAL RDTE PROGRAM  
PROGRAM LIMITED TO UNIQUE MILITARY PROBLEMS WITHIN US & OCONUS  
INFECTIOUS DISEASES AND COMBAT DENTAL FUNCTIONS OF FIVE US NAVY LABORATORIES ARE FUNDED BY THE US ARMY AS LEAD AGENCY, BY DIR. OF CONGRESS.

...CURRENT IMPORTANT PROGRAMS

CARE OF THE WOUNDED  
PREVENTION AND CONTROL OF INFECTIOUS DISEASES  
ENHANCEMENT OF MILITARY PERFORMANCE  
PROTECTION AGAINST MILITARY ENVIRONMENTAL HAZARDS  
MEDICAL DEFENSE AGAINST CHEMICAL WARFARE

...FUNCTIONS/EQUIPMENT/CAPABILITIES

SERVES AS AN ADMINISTRATIVE HEADQUARTERS FOR THE ARMY MEDICAL DEPARTMENT

INSTALLATION: MEDICAL RESEARCH INSTITUTE CHEMICAL DEFENSE ABERDEEN PROV. GR., MD

CDR. COL. DUANE E. HILMAS

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	35.239	86.043
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.024	0.054
TOTAL OTHER	2.555	2.730
TOTAL ANNUAL LAB	37.818	88.827
TOTAL INHOUSE	17.005	19.405
TOTAL INHOUSE RDT&E	14.426	16.621
ANNUAL OPERATING COST	2.360	2.480

PERSONNEL	PERSONNEL DATA (END OF FY 1983)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	85	33	47	38
CIVILIAN	159	22	69	90
TOTAL	244	55	116	128

ACRES	SPACE AND PROPERTY				COST (MILLION \$)	
	SPACE (THOUSANDS OF SQUARE FEET)				REAL PROP	EQUIP
	LAB	ADMIN	OTHER	TOTAL		
31	36.426	15.345	98.429	150.200	9.246	6.160

...MISSION

FUNDAMENTAL RES ON MECHANISMS OF ACTION (CW AGENTS, ANTIDOTES & PRETREAT)  
DEVELOPMENT OF PRETREATMENT & ANTIDOTE DRUGS (AGAINST CW AGENTS)  
DEVELOP & EVALUATE PREVENTION, RESUSCITATION, TREATMENT & MANAGEMENT  
METHODS FOR CHEMICAL CASUALTIES AND ASSIST IN THEIR IMPLEMENTATION

...CURRENT IMPORTANT PROGRAMS

MEDICAL CHEMICAL DEFENSE SCIENCE BASE/MECHANISM OF ACTION AGENTS/DRUGS  
DEVELOP SOLDIER CW AGENT ANTIDOTES & PRETREATMENT REGIMEN  
DEVELOP BIOMEDICAL MODELS TO EVALUATE DRUG EFFICACY  
EVALUATE BEHAVIORAL/PERFORMANCE DECREMENTS FROM CW AGENTS/ANTIDOTES  
DEVELOP METHODS FOR MGT & TREATMENT OF MASS CW CASUALTIES

...FUNCTIONS/EQUIPMENT/CAPABILITIES

MODERN 7000 SQ FT ANIMAL HOLDING FACILITY & CHEMICAL SURETY AREA  
TECH LIBRARY HAS 5062 BOOKS, 837 JOURNAL TITLES, MANY DATA BASES  
COMPLETE VIDEO PRODUCTION FACILITY & COMPUTER FACILITY (WITH NETWORK)  
MEDICAL MAINTENANCE FACILITY, LABORATORY SUPPLY FACILITY  
RADIOISOTOPE CHEMICAL DRUGS & BIOCHEMICAL ANALYSIS  
BEHAVIORAL TESTING LABORATORY  
LIQUID, GAS, COLUMN & AFFINITY CHROMATOGRAPHY, ANAL ULTRACENTRIFUGE  
ELECTROPHORESIS, SPECTROSCOPY, FLUOROMETRY, AND SPECTROPOLARIMETRY  
GE MASS SPECTROMETRY AND ELECTRON SPIN RESONANCE  
AMINO ACID ANALYSIS AND PEPTIDE SEQUENCING, MONOCLONAL ANTIBODIES  
PHYSIOLOGY, PHARMACOLOGY AND NEUROPHARMACOLOGY LABORATORIES  
ELECTRON MICROSCOPY SEM, TISSUE CULTURE, CELL CLONING, RECEPTOR ANALYSIS

CDR. COL. D. L. HUXSOLL

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	27.916	35.880
TOTAL PROCURFMENT	0.000	0.000
TOTAL O&M	0.493	0.410
TOTAL OTHER	6.155	7.187
TOTAL ANNUAL LAB	34.564	43.477
TOTAL INHOUSE	23.081	24.092
TOTAL INHOUSE RDT&E	16.433	16.495
ANNUAL OPERATING COST	7.545	8.247

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	305	46	104	201
CIVILIAN	205	41	92	113
TOTAL	510	87	196	314

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
43	104.136	20.718	209.699	334.553	18.763	11.000

...MISSION

PERFORM STUDIES ON THE PATHOGENESIS,DIAGNOSIS,PROPHYLAXIS,TREATMENT AND EPIDEMIOLOGY OF NATURALLY OCCURING INFECTIOUS DISEASE OF MILITARY IMPORTANCE WITH EMPHASIS ON PROBLEMS ASSOCIATED WITH THE MEDICAL DEFENSE AGAINST BIOLOGICAL AGENTS.

...CURRENT IMPORTANT PROGRAMS

ANTHRACIS DISCOVERED TO CONTAIN A PLASMID WHICH CODES  
RIFT VALLEY FEVER STUDIES DETERMINED THAT G1 AND G2 POLYPEPT RESPONSIBLE FOR THE DEVELOPMENT OF ANTIBODIES THAT PROTECT EXP ANIMALS FROM INFECTION.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

JUNIN VIRUS IS HIGHLY INFECTIOUS AS A SMALL PARTICLE AEROSOL THE ELISA FOR VEE-IGM CAPTURE SYSTEM WAS DEVELOPED AND STAND THE GENE FOR PROTECTIVE ANTIGEN WAS ISOLATED FROM ANTHRAX PL IN E.COLI AND THE BACTERIUM PRODUCED PA THAT WAS FUNCTIONAL NEUTRALIZATION TEST DEVELOPED FOR LASSA FEVER AND CAN BE USED POTENTIAL DONORS FOR HIGH TITERING ANTIBODY THAT PROVIDES GO MURAMYL DIPEPTIDE,WHEN DELIVERED BY LIPOSOMES,WAS USED TO TREAT MICE INFECTED WITH RIFT VALLEY FEVER.



INSTALLATION: MISSILE LABORATORY

REDSTONE ARSENAL, AL.

CDR. MAJ. GEN. JERRY MAX BUNYARD DIR. DR. WILLIAM C. MCCORKLE

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	177.053	156.546
TOTAL PROCUREMENT	22.688	30.286
TOTAL O&M	33.754	19.256
TOTAL OTHER	24.965	23.692
TOTAL ANNUAL LAB	258.460	229.780
TOTAL INHOUSE	104.426	104.819
TOTAL INHOUSE RDT&E	69.028	64.232
ANNUAL OPERATING COST	23.147	24.580

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	45	4	81	14
CIVILIAN	1170	70	776	394
TOTAL	1215	74	807	408

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
11000	664.000	224.000	252.000	1140.000	96.400	90.000

...MISSION

MNGE & CONDUCT RSCH, EXPL & ADV DEV FOR ASSGN MATL; PROV  
S&E SPT TO OTHER ACTIVITIES; PLANS, DIRECTS & CONDUCTS RSCH STUDIES &  
PRCMS TO ADV SYS ENGR & TESTING TECH; PROV CENTRAL ENGR  
BASE FOR DESIGN & MFG OF PROTOTYPE SYS & COMPONENTS

...CURRENT IMPORTANT PROGRAMS

EXPLORATORY DEV ON OVER ARMOR TECHNOLOGY SYNTHESIS  
KINETIC ENERGY RKT  
INFRARED ADJUNCT GUIDANCE  
DEV OF FIBER OPTICS GUIDED MSL  
DEV MULTI-ENVIRON ACTIVE RF SEEKER MISSION.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

LAB IS EQUIPPED TO STUDY PROBLEMS IN PROP, AERO, G&C, & STRUCTURES, MAJOR  
FAC IS MCMORROW LAB WHICH HOUSES MAJORITY OF AML. SOME UNIQUE  
FAC ARE: ADV SIM CNTR; A COMPUTER COMPLEX SURROUNDED PERIPHERALLY BY 3  
ENVIRON EFFECTS SIMULATORS; MSL COMPUTER SOFTWARE/HWDE CNTR; SIG EVAL  
CHAMBERS; ARMY MSL OPTICAL RANGE DESIGNED TO MEASURE LASER RADAR SIG.  
MAINTAINS AND OPERATES 7 MAJOR TEST AREAS WHICH ENCOMPASS FLIGHT STATIC  
ENVIRON & FUNCTIONAL TEST; STATE-OF-THE-ART FAC & EQUIP SUCH  
AS LASER TRACKERS & ELECTRO-MAGNETIC RADAR SENSORS, ENGR DESIGN & DEV  
CORRECTIONS TO DESIGN DEFICIENCIES IN FIELDIED WPN SYS. PERFORMS ARMY  
LEAD LAB FUNCTION IN GUID & CONTROL/TERMINAL HOMING TECH.  
MECH, ELECT & ELEC FAB & ASSY & HYBRID MICROCIRCUITRY DE-  
SIGN ARE AVAILABLE, SMOKE CHARACTERIZATION FAC IS ALSO AVAILABLE

INSTALLATION: NATICK R. & D CENTER

NATICK, MA.

CDR. COL. DAVID L. SAUNDERS

TECH. DIR. DR. ROBERT J. BYRNE

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	47.813	48.160
TOTAL PROCUREMENT	0.363	0.189
TOTAL O&M	16.728	15.591
TOTAL OTHER	2.829	2.934
TOTAL ANNUAL LAB	67.733	66.874
TOTAL INHOUSE	55.417	55.202
TOTAL INHOUSE RDT&E	36.859	37.672
ANNUAL OPERATING COST	8.495	9.150

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	105	8	40	65
CIVILIAN	1092	77	391	701
TOTAL	1197	80	431	766

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
24	527.067	55.340	277.817	860.224	28.497	22.850

...MISSION

CHEMICAL AND BALLISTIC HARDENED TACTICAL SHELTERS  
FOOD/FOOD SYS' CONTAINERS AND PACKAGING. PERF ILS FUNC. ENG SPT TO DLA  
AND GSA PROC. FIRST PROD BUY/FIELDING OF ARMY MANAGED ITEMS.  
BACTERIOLOGY LAB EQUIP FOR INVES OF PATHOGENIC MICROORGANISMS

...CURRENT IMPORTANT PROGRAMS

CHEMICAL PROTECTION  
ACCOMP R&D IN THE PHYS AND BIOL SCI AND ENGR TO MEET MIL NEEDS  
LASER/HIGH ENERGY PROTECTION  
MICROCLIMATE COOLING PROGRAM FOR GROUND AND AIR COMBAT VEHICLES  
COMBAT FIELD FEEDING SYSTEM.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

RESOLUTION MASS SPECTROMETER FOR ANAL OF VOLATILE COMPOUNDS' FEBETRON  
AND PERS EQUIP' AIRDROP' FIELD SHELTERS AND EQUIPAGE' FIELD ORG EQUIP'  
MACHINE USED FOR FOOD OXIDATION' SCANNING TRANSMISSION ELECTRON MICRO-  
SCOPE' LASER LAB FOR EVAL OF HIGH ENERGY LASERS ON CLO AND RELATED MAT'  
DYEING AND FINISHING LAB FOR STUDIES OF TEXTILES' COMPUTER GENERATED SYS  
OF CLO PATTERNS TO OUTPUT COMPL TARIFF OF SIZES FROM ONE MASTER' CLI-  
MATIC CHAMBERS W/TEMPS -57C TO 74C W/WIND AND RAIN' FLAME PROT LAB AND  
FACILITY INCL OUTDOOR FIRE PIT' AIRCRAFT ROLLER CONVEYER TEST FAC' DROP  
TEST FAC' 40 X 40 FT RAINCOURT' FOOD PROC LAB' FOOD SYS EQUIP LAB'  
EXPERIMENTAL KITCHEN' SENSORY EVALUATION LAB' HORIZONTAL IMPACT TESTING  
MACHINE' UNIVAC 1106, IBM 4341, PRIME 750 CAD/E, AND PRIME 2250 COM-  
PUTERS WITH PERIPHERAL EQUIPMENT AND SOFTWARE.

# INSTALLATION: NIGHT VISION & ELECTRO OPTICS LABORATORY

FT. BELVOIR, VA.

DIR. DR. LOUIS M. CAMERON

## PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	75.088	83.375
TOTAL PROCUREMENT	94.357	111.806
TOTAL O&M	2.844	2.257
TOTAL OTHER	0.000	0.000
TOTAL ANNUAL LAB	172.289	200.438
TOTAL INHOUSE	32.036	32.825
TOTAL INHOUSE RDT&E	25.614	26.568
ANNUAL OPERATING COST	3.209	3.320

## PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	32	0	6	26
CIVILIAN	470	39	216	254
TOTAL	502	39	222	280

## SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
38	180.639	27.186	20.000	227.825	32.000	31.237

## ...MISSION

NV&EOL IS RESPONSIBLE FOR PROVIDING THE ARMY WITH AN ELECTRO-OPTICAL CAPABILITY THAT WILL ALLOW IT TO OPERATE WITH NEAR DAYLIGHT EFFICIENCY. THE SYSTEMS DEV PROGRAM IS STRUCTURED AROUND A STRONG TECHNOLOGY BASE WHICH CONSISTS OF FIR, ELECTRO-OPTICS, LASERS AND VISIONICS.

## ...CURRENT IMPORTANT PROGRAMS

EPITAXIAL GROWTH FOR COMMON MOD AND 2ND GEN DETECTORS  
AUTOMATION OF FLIR AND MULTI-SENSORS  
NEAR INFRARED AND FAR INFRARED TUNABLE LASERS  
THERMAL WEAPONS SIGHT  
NIGHT VISION GOGGLES, AN/PVS-7.

## ...FUNCTIONS/EQUIPMENT/CAPABILITIES

MAJOR FACILITIES INCLUDE: NIGHT VISION SYSTEM LAB, IR DETECTOR FABR AND ANALYSIS FACILITY, SURFACE RESEARCH FACILITY, FOCAL PLANE ARRAY TEST FACILITY, IR OPTICAL TEST FACILITY, IMAGE INTENSIFIER TUBE TESTING FACILITY, SEMICONDUCTOR MATERIALS RESEARCH FACILITY, ELECTRONICS TEST FACILITY, INTERACTIVE IMAGE PROCESSING FACILITY, LASER RANGES, 3-D MULTI SPECTRAL SEARCH SIMULATOR, SCIENTIFIC COMPUTER CENTER, FIRING TEST RANGE, EO/IR IMAGE EVALUATION FACILITY, AND LASER MATERIAL EVALUATION FACILITY.

INSTALLATION: RESEARCH INST FOR BEHAVIORAL & SOCIAL SCI ALEXANDRIA, VA.

CDR. COL. L. NEALE COSBY

TECH. DIR. DR. EDGAR M. JOHNSON

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	39.892	46.352
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	8.996	10.548
TOTAL OTHER	1.351	1.271
TOTAL ANNUAL LAB	50.239	58.171
TOTAL INHOUSE	19.132	24.030
TOTAL INHOUSE RDT&E	17.537	22.589
ANNUAL OPERATING COST	6.017	8.627

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	31	0	30	1
CIVILIAN	374	166	271	103
TOTAL	405	166	301	104

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
0	8.008	51.310	3.191	57.509	0.550	0.700

...MISSION

TO MAXIMIZE COMBAT EFFECTIVENESS THROUGH RESEARCH IN THE ACQUISITION  
DEVELOPMENT AND UTILIZATION OF SOLDIERS IN MILITARY SYSTEMS

...CURRENT IMPORTANT PROGRAMS

OFFICER SELECTION BATTERY  
COMPUTERIZED TUTOR  
REALISTIC AIR DEFENSE ENGAGEMENT SIMULATION  
STINGER REVERSE ENGINEERING  
ARMY DEVELOPMENT AND EMPLOYMENT AGENCY TRAINING SYSTEMS.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

THREE RESEARCH LABORATORIES, MANPOWER PERSONNEL, TRAINING AND SYSTEMS ARE  
DIVIDED INTO 8 FIELD UNITS AT PRESIDIO OF MONTEREY, FT BENNING, FT KNOX,  
FT RUCKER, FT BLISS, FT HOOD, FT LEAVENWORTH, AND EUROPR. PEOPLE RELATED  
RESEARCH IN AVIATION ON SYSTEMS INTEGRATION, COMMAND AND CONTROL, MANEUVER  
ARMS AND UNIT TRAINING/EVALUATION. 7 TECH AREAS ARE AT ARI HQ PERSONNEL  
UTILIZATION, LEADERSHIP/MANAGEMENT, SELECTION, CLASSIFICATION, SYSTEMS  
MANNING, BATTLEFIELD INFO SYSTEMS, TRWG AND INSTRUCTIONAL TECH SYSTEMS. 5  
SCIENTIFIC COORDINATION OFFICES AT FT SILL, EUROPE, FORSCOM, TRADOC, PM  
TRADE. IN HOUSE EXPERIMENTAL FACILITIES INCLUDE LABORATORY AREAS-COMPUTER  
THAT PERMIT REALTIME EXPERIMENTATION GAMING AND SIMULATION WITH EXTERNAL  
LINES. TO PROVIDE FLEXIBILITY.

INSTALLATION: RSCH INSTITUTE OF ENVIRONMENTAL MEDICINE NATICK, MA.

CDR. COL. ERNEST M. IRONS JR.

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	5.516	5.734
TOTAL PROCUREMENT	0.004	0.000
TOTAL O&M	0.066	0.060
TOTAL OTHER	1.559	1.982
TOTAL ANNUAL LAB	7.145	7.776
TOTAL INHOUSE	6.508	7.183
TOTAL INHOUSE RDT&E	4.879	5.141
ANNUAL OPERATING COST	0.000	0.000

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	77	6	39	38
CIVILIAN	97	18	59	38
TOTAL	174	24	98	76

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
4	60.421	18.793	28.647	107.861	4.084	6.704

...MISSION

CONDUCTS RSCH TO DETERMINE VARIOUS EFFS ON SOLDIER'S LIFE PROC, PERFHILTH.  
DEF INTERACTION ENV STRESS, DEF, TECH, EQUIP, PROCED USED TO PROT SOLD EFF.  
CONDUCTS RSCH IN PHYS & HLTH EFF OF ARMY PHYSICAL FITNESS TRAINING.  
DEV RSCH TECH BASE TO DISCHARGE ARMY SG RESPON AS DOD FxE AGT FOR NUTRI.

...CURRENT IMPORTANT PROGRAMS

DEVELOPMENT OF MEPSCAT.  
ASSESS WORK LIMITS IMPOSED ON SOLDIER BY PROTECT REGTS TO CW AGTS.  
BIOMED IMPACT OF MIL CLOTHING & EQUIP DESIGN INCL SEL CREW COMPART ENV.  
INVESTIGATIONS DIR TOWARD PREV & TREATMENT OF HEAT INJ & COLD INJ.  
STRUCT & FUNCT ALTERATIONS CELLS, TISSUES & ORGANS INDUCES EXP ENV EXTR.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

THE MAJ EQUIP & FAC CAPABILITIES OF THE LAB INCL, BUT ARE NOT LIMITED TO  
TWO LGE ALT CHAMBERS, 14 SM CLIMATIC CHAMBERS, AAALAC ACCREDITED ANIMAL  
CARE FACILITIES, ELECTRON MICROSCOPY, UNDERWATER RSCH POOL, COPPER MANI-  
KINS & DIVERSE PHARMACOLOGICAL & PSYCHOLOGICAL MEASURING EQUIP. THE IN-  
STITUTE MAINTAINS A FIELD FACILITY ON THE SUMMIT OF PIKES PEAK, COLO.

CDR. DIR. MR. H. S. HOVEY JR

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	46.056	48.679
TOTAL PROCUREMENT	55.903	174.406
TOTAL O&M	3.995	7.317
TOTAL OTHER	0.000	0.000
TOTAL ANNUAL LAB	105.954	230.402
TOTAL INHOUSE	8.495	10.221
TOTAL INHOUSE RDT&E	5.739	5.831
ANNUAL OPERATING COST	2.031	2.487

PERSONNEL	PERSONNEL DATA (END OF FY 1983)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	51	0	10	41
CIVILIAN	180	5	33	87
TOTAL	231	5	103	128

ACRES	SPACE AND PROPERTY				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
10	3.986	29.145	6.933	40.094	3.500	5.800

## ...MISSION

PROVIDE THE US ARMY WITH EFFECTIVE TACTICAL COMMUNICATIONS, ELECTRONIC WARFARE AND TACTICAL AND STRATEGIC COMMUNICATIONS, INTELLIGENCE (COMINT). MATERIAL CAPABILITY IN SUPPORT OF THE ARMY'S MISSION.

## ...CURRENT IMPORTANT PROGRAMS

AN/TSQ-114 TRAILBLAZER  
AN/MLQ-34 TACJAM  
AN/TLQ-17A TRAFFIC JAM  
AN/TRQ-32 TEAMMATE  
AN/TSQ-113 AND AN/TSS-11 REAR ECHELON COMINT

## ...FUNCTIONS/EQUIPMENT/CAPABILITIES

THE US ARMY SIGNALS WARFARE LABORATORY IS LOCATED AT VINT HILL FARMS STATION, WARRENTON, VIRGINIA, IN A FACILITY UNIQUELY SUITED TO ITS COMMUNICATIONS INTERCEPT, PROCESSING, COLLECTION, DIRECTION FINDING AND JAMMING MATERIEL MISSION. FACILITIES AVAILABLE INCLUDE AN ANTENNA FIELD FOR SIGNALS COLLECTION, A COMPUTERIZED SIGNAL ANALYSIS PROCESSING SYSTEM FOR SIGNALS SIMULATION AND ANALYSIS, AND AN IN-HOUSE FACILITY FOR SYSTEM SOFTWARE VERIFICATION AND VALIDATION. THE LAB IS STAFFED WITH THE ELECTRONICS ENGINEERS, TECHNICAL SIGNAL ANALYSIS, OPERATION RESEARCH ANALYSIS, INTEGRATED LOGISTICS SUPPORT PERSONNEL, PRODUCT AND QUALITY ASSURANCE TECHNICIANS, AND PRODUCTION ENGINEERS TO PROVIDE FOR MILITARILY USEFUL EQUIPMENT AND SYSTEM.

INSTALLATION: TANK-AUTO COMMAND R & D CENTER

WARREN, MI.

CDR. COL. T. J. HUBER

TECH. DIR. DR. H. H. DOERS

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	101.149	114.901
TOTAL PROCUREMENT	591.880	1,014.750
TOTAL O&M	4.252	3.900
TOTAL OTHER	1.178	1.295
TOTAL ANNUAL LAB	697.659	1,134.846
TOTAL INHOUSE	35.282	46.741
TOTAL INHOUSE RDT&E	24.194	27.461
ANNUAL OPERATING COST	12.844	13.615

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	36	0	21	15
CIVILIAN	554	14	218	336
TOTAL	590	14	239	351

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
11	257.152	33.284	111.777	402.213	39.600	117.445

...MISSION

RESPONSIBLE FOR ACCOMPLISHING DESIGN, DEVELOPMENT, ACQUISITION & INITIAL DEPLOYMENT OF ASSIGNED TANK-AUTO WEAPONS EQUIPMENT SYSTEMS. CONDUCT & MANAGE RESEARCH, PERFORM PROCUREMENT & QUALITY ASSURANCE THRU DEVELOPMENT. PERFORM RELIABILITY-MAINTAINABILITY ASSESSMENT.

...CURRENT IMPORTANT PROGRAMS

COMBAT VEHICLE TRACK & SUSPENSION PROGRAM.  
COMBAT VEHICLE SURVIVABILITY THRU THREAT WARNING & DATA MGMT.  
VEHICLE ELECTRICAL/ELECTRONIC SYSTEMS INTEGRATION.  
FUTURE CLOSE COMBAT VEHICLE SYSTEMS DESIGN & TEST BED DEMO'S.  
ADVANCED INTEGRATED PROPULSION SYSTEMS.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

VEHICLE BRAKE DYNAMOMETER, ENGINE & TRANSMISSION TEST CELLS.  
VEHICLE COMPONENT/SUBSYSTEM INTEGRATION & EVALUATION, VEHICLE MOTION SIMULATOR, ANALYTICAL PREDICTION OF LAND VEHICLE PERFORMANCE, VEHICLE SIGNATURE MEASUREMENT CAPABILITY, SIX DEGREE OF FREEDOM SIMULATOR  
SCIENTIFIC & ENGINEERING COMPUTER NETWORK (SENET) FOR COMPUTER AIDED DESIGN (CAD) SERVICES, METAL ANALYSIS WITH MICROPROBE ELECTRON MICROSCOPE ANALYZER & TECHNIQUES, DEVELOPMENT OF IMPROVED ARMOR WELDING, FABRICATION & APPLICATION TECHNIQUES, LOW TEMPERATURE SHOCK & VIBRATION TEST FACILITIES, VEHICLE DYNAMIC SIMULATION FACILITY, IMAGE PROCESSING CAPABILITY, HOLOGRAPHIC CAPABILITY FOR LARGE STRUCTURES.

INSTALLATION: TROPIC TEST CENTER

FT. CLAYTON, C.Z.

CDR. COL. RICHARD P. BARRERE

TECH. DIR. MR. FRANK S. MENDEZ

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	3.996	3.926
TOTAL PROCUREMENT	0.145	0.045
TOTAL O&M	0.009	0.000
TOTAL OTHER	1.567	1.599
TOTAL ANNUAL LAB	5.717	5.570
TOTAL INHOUSE	5.652	5.510
TOTAL INHOUSE RDT&E	3.931	3.866
ANNUAL OPERATING COST	0.496	0.496

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	71	0	8	63
CIVILIAN	60	2	14	46
TOTAL	131	2	22	109

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
2625	18.000	35.925	88.556	142.481	0.874	3.406

...MISSION

PLAN, CONDUCT AND REPORT ON ENVIRONMENTAL PHASES OF DEVELOPMENT TEST II AND OTHER DEVELOPMENTAL TYPE TESTS. PROVIDE ADVICE AND GUIDANCE ON TESTS AND EVALUATION MATTERS TO MATERIEL DEVELOPERS, MATERIEL PRODUCERS, OTHER SERVICES AND PRIVATE INDUSTRY.

...CURRENT IMPORTANT PROGRAMS

BULK FUEL TANK ASSEMBLY  
155MM SMOKE PROJECTILE  
120MM CARTRIDGE  
TEST METHODOLOGY STUDIES  
INDEPENDENT LABORATORY IN-HOUSE RESEARCH STUDIES.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

TEST FACILITIES AND LABORATORIES WITH INSTRUMENTS AND EQUIPMENT FOR CONDUCTING TROPICAL TESTS OF DOD MATERIEL IN THE NATURAL ENVIRONMENT TO INCLUDE ELECTRONICS, HUMAN FACTORS, CHEMICAL, MICROBIOLOGICAL, MATERIALS, SOILS, AUDIO-VISUAL, AND DATA ANALYSIS LABORATORIES.  
OTHER TEST RESOURCES CONSIST OF FIRING RANGES, NATURAL TERRAIN MOBILITY COURSES, AMMO TEST STORAGE AND FUNCTIONING AREAS, JUNGLE, GRASS, AND COASTAL MATERIEL EXPOSURE SITES, JUNGLE RADIO RANGING SITES, POL TANK FARM, MANPACK PORTABILITY COURSE, CALIBRATED SEISMIC DETECTION AND CHEMICAL TEST GRIDS AND 2533 ACRES OF BROADLEAF EVERGREEN TREES, SEMIDECIDUOUS TREES, MARSHLAND, GRASSLAND, CORAL REEFS, FLAT AND HILLY TERRAIN AND ALL TYPES OF TROPIC VEGETATION.



INSTALLATION: WALTER REED ARMY INSTITUTE OF RESEARCH

WASHINGTON, D.C.

DIR. COL. FRANKLIN H. TOP JR

DEP. DIR. LTC. FRANK SODETZ JR

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	53.062	94.098
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	1.972	1.960
TOTAL OTHER	12.246	13.288
TOTAL ANNUAL LAB	67.280	109.346
TOTAL INHOUSE	48.344	52.189
TOTAL INHOUSE RDT&E	34.126	38.415
ANNUAL OPERATING COST	2.631	4.000

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	411	82	386	25
CIVILIAN	598	59	278	320
TOTAL	1009	141	664	345

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP.	EQUIP
203	383.274	58.600	0.000	441.874	10.080	20.500

...MISSION

PERFORMS GENERAL MILITARY MEDICINE RESEARCH IN THE AREAS OF  
DRUG DEV, NEUROPSY, GEN MED & PREV MED SERVES AS COM & CONTROL ELEMENT FOR  
SPEC FOREIGN ACTIVITIES. PLANS AND CONDUCTS AMEDD COURSES.

...CURRENT IMPORTANT PROGRAMS

BASIC RESEARCH ON MILITARY DISEASES  
MILITARY PSYCHIATRY  
MICROWAVE INJURY, PREVENTION & TREATMENT  
MED EFFECTS OF WEAPONS SYS BLAST OVERPRESSURE  
MED ASPECTS OF CHEM WARFARE DEF.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

MAJOR EQUIP & FACILITY CAPABILITY OF THE LAB INCLUDES CHEM ANALY EQUIP,  
MICRO LABS, MICROWAVE ESPOSURE SYS, BEHAVIORAL RES INSTRU AND ELECTRON  
MICROSCOPES. ADDTL RSCH FACILITIES ARE LOCATED IN GERMANY, MALAYSIA,  
KENYA, BRAZIL, THAILAND AND MARIAND

INSTALLATION: WHITE SANDS MISSILE RANGE

WHITE SANDS, N.M.

CDR. MG. NILES J. FULWYLER

SCI. TECH. DIR. DR. RICHARD H. DUNCAN

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	235.366	244.791
TOTAL PROCUREMENT	17.811	16.800
TOTAL O&M	8.276	7.534
TOTAL OTHER	20.908	22.807
TOTAL ANNUAL LAB	282.361	291.932
TOTAL INHOUSE	179.331	180.047
TOTAL INHOUSE RDT&E	147.861	148.680
ANNUAL OPERATING COST	41.529	39.922

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	895	17	478	417
CIVILIAN	2742	59	1102	1640
TOTAL	3637	76	1580	2057

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1748490	52.945	583.920	4429.591	5066.456	225.326	252.826

...MISSION

TO PROVIDE AND OPERATE A NATIONAL TEST RANGE,  
TO TEST AND EVALUATE ARMY MATERIEL, AND  
TO OPERATE AND MAINTAIN THE INSTALLATION.

...CURRENT IMPORTANT PROGRAMS

ARMY-PERSHING, PATRIOT, COPPERHEAD, MLRS, AND HAWK  
AIR FORCE-AMRAAM, AIM, AND AIRBORNE LASER LAB  
NAVY-ROLLING AIRFRAME MISSILE, STANDARD MISSILE, AND SOUNDING ROCKETS  
NASA-SPACE SHUTTLE  
OTHER-DOD HIGH ENERGY LASER SYSTEMS TEST FACILITY (HELSTF) AND DNA TESTS

...FUNCTIONS/EQUIPMENT/CAPABILITIES

WSMR, AN ALL OVER LAND TEST RANGE, PROVIDES TREMENDOUS LAND AND AIRSPACE FOR MISSILE SYSTEM/SUBSYSTEM TESTING. THE RANGE PROVIDES INTERNAL AND EXTERNAL MEASUREMENTS DATA UTILIZING TELEMETRY (SECURE) AND RADAR, LASER TRACKING, INTERFEROMETER, OPTICAL, AND OTHER INSTRUMENTATION SYSTEMS. THESE SYSTEMS, THE LAUNCH COMPLEXES, CONTROL CENTERS, AND DATA PROCESSING AND DISPLAY FACILITIES ARE JOINED BY EXTENSIVE TIMING AND COMMUNICATIONS SYSTEMS. OTHER CAPABILITIES INCLUDE: EXPERIMENTAL PAYLOAD AND MISSILE COMPONENT RECOVERY, AIR AND GROUND MULTIPLE TARGET CONTROL, AND GEODETIC SURVEYING. OTHER TEST FACILITIES AND EQUIPMENT INCLUDE: GUIDANCE, ELECTRO-OPTICAL AND MICRO-WAVE SYSTEMS; DYNAMIC AND CLIMATIC ENVIRONMENTS, CHEMICAL, METALLURGICAL, MICROBIOLOGICAL, NUCLEAR AND ELECTROMAGNETIC EFFECTS; AND HAZARDOUS WARHEADS AND EXPLOSIVES.

INSTALLATION: YUMA PROVING GROUND

YUMA, AZ

CDR. COL. ROBERT H. LIPINSKI

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	42.312	46.552
TOTAL PROCUREMENT	7.779	7.232
TOTAL O&M	3.116	3.430
TOTAL OTHER	11.661	11.382
TOTAL ANNUAL LAB	64.868	68.596
TOTAL INHOUSE	55.207	58.306
TOTAL INHOUSE RDT&E	38.687	42.436
ANNUAL OPERATING COST	14.313	15.046

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	445	0	46	399
CIVILIAN	693	0	58	635
TOTAL	1138	0	104	1034

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)	COST (MILLION \$)
	LAB ADMIN OTHER TOTAL	REAL PROP EQUIP
838061	0.832 108.153 1484.359 1593.344	59.611 75.704

...MISSION

PLAN, CONDUCT, SUPPORT DEVELOPMENT TEST OF AIR DELIVERY SYSTEMS, LONG RANGE TUBE ARTILLERY, AIRCRAFT ARMAMENT, DIRECT FIRE WEAPONS AND AUTOMOTIVE EQUIPMENT. PLAN AND CONDUCT DESERT FIELD TESTS AND ENVIRONMENT SIMULATION. DEVELOP TEST INSTRUMENTATION AND METHODS.

...CURRENT IMPORTANT PROGRAMS

GLOBAL POSITIONING SYSTEM  
ARMY HELICOPTER IMPROVEMENT PROGRAM  
60,000 POUND AIR DELIVERY SYSTEM  
M718 155MM PROJECTILE  
M1E1 ABRAMS TANK.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

INSTRUMENTED OVERLAND 60KM ARTILLERY RANGE WITH SUPPORT FACILITIES  
20 X 30 KM AIRCRAFT ARMAMENT RANGE AND AIR DELIVERY DROP ZONES SUPPORTED BY 6 LASER TRACKERS, POSITION LOCATING SYSTEM, IM, CINETHEODOLITES, AND VIDEO SCORING/EVENTS CONNECTED TO A REAL-TIME DATA PROCESSING SYSTEM  
5 SEP AIRSPACE CONTROLLED AREAS PERMITS SAFE CONDUCT OF CONCURRENT TEST.  
SEVERAL AUTOMOTIVE TEST COURSES FOR PERFORMANCE, MOBILITY AND DURABILITY TESTS INCLUDING PAVED DYNAMETER COURSE WITH NOBLE DYNOS AND SUPPORT SHOP  
PHYSICAL MEASUREMENT, TDT, X-RAY, PETROL AND CHEMICAL LABS.  
STATIONARY, MOVING VISUAL TARGETS AND THERMAL TARGET PANELS.  
SCIENTIFIC COMPUTER CENTER WITH REAL-TIME AND BATCH DATA PROCESSING.  
HARD SURFACE AIRFIELD WITH 5150 AND 6000 FT RUNWAYS, MAINTENANCE FAC.  
TECH INFO CENTER INCL WORLD DESERT TERRAIN DATA AND CLIMATIC INFO.

INSTALLATION: AEROSPACE MEDICAL RESEARCH LABORATORY

PENSACOLA, FL.

C.O. CAPT. W. M. HOLK

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	3.683	3.461
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	0.705	0.717
TOTAL ANNUAL LAB	4.388	4.178
TOTAL INHOUSE	4.195	4.088
TOTAL INHOUSE RDT&E	3.490	3.371
ANNUAL OPERATING COST	1.255	1.286

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	37	10	14	23
CIVILIAN	55	10	23	32
TOTAL	92	20	37	55

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
7	111.293	6.796	8.052	126.141	3.130	4.191

...MISSION

CONDUCT RESEARCH, DEVELOPMENT, TEST AND EVALUATION IN AVIATION MEDICINE AND ALLIED SCIENCES RELATED TO THE SAFETY AND PERFORMANCE OF NAVY AND MARINE CORPS PERSONNEL.

...CURRENT IMPORTANT PROGRAMS

AVIATION MEDICAL PERFORMANCE BASE STANDARDS  
PHYSIOLOGICAL AND BEHAVIORAL EFFECTS NONIONIZING RADIATION.  
HUMAN FACTORS DESIGN CRITERIA DEVELOPMENT.  
DEVELOPMENT IN PERFORMANCE ENHANCEMENT IN NAVAL MOTION ENVIRONMENTS.  
AVIATION VISUAL PERFORMANCE REQUIREMENTS AND CAPABILITIES.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

MICROWAVE AND EXTREMELY LOW FREQUENCY NONIONIZING RADIATION FACILITY.  
SLOW ROTATION ROOM. CORIOLIS ACCELERATION PLATFORM. HUMAN DISORIENTATION DEVICE. STILL-WERNER CHAIR. OFF VERTICAL ROTATING CHAIR. ANACHOIC AND REVERBERANT CHAMBERS. AUTOMATED PULMONARY FUNCTION. TREADMILL. VECTOR AND ECHOCARDIOGRAPH. THERMOGRAPHIC IMAGING SYSTEM. 30 BINOCULAR EYE-TRACKER AND VISUAL STIMULATOR ELECTRON MICROSCOPE. VIVARIUM WITH OPERATING SUITE. EQUIPPED FOR HUMAN AND ANIMAL EXPERIMENTS IN UNUSUAL FORCE ATMOSPHERIC ACOUSTICAL ELECTROMAGNETIC ENVIRONMENTS. COMPLEX TASKS HUMAN PERFORMANCE MEASUREMENT SYSTEMS.

INSTALLATION: AIR DEVELOPMENT CENTER

JOHNSVILLE, PA.

C.O. CAPT. J. B. ANDERSON

TECH. DIR. MR. R. S. BUFFUM

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	171.072	193.004
TOTAL PROCUREMENT	67.767	63.491
TOTAL O&M	41.920	45.291
TOTAL OTHER	37.590	29.307
TOTAL ANNUAL LAB	218.349	331.093
TOTAL INHOUSE	120.514	132.854
TOTAL INHOUSE RDT&E	80.647	84.233
ANNUAL OPERATING COST	54.965	66.906

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	254	5	63	191
CIVILIAN	2225	43	1305	920
TOTAL	2479	48	1368	1111

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
840	852.000	83.000	654.000	1589.000	37.900	52.000

...MISSION

TO BE THE PRINCIPAL NAVY RDT&E CENTER FOR NAVAL AIRCRAFT SYSTEMS  
LESS AIRCRAFT LAUNCHED WEAPON SYSTEMS

...CURRENT IMPORTANT PROGRAMS

TACTICAL SUPPORT CENTER

S-3A, F-14, F-18, VP PROGRAM

LIGHT AIRBORNE MULTI-PURPOSE SYSTEMS

V/STOL

J-TIDS

...FUNCTIONS/EQUIPMENT/CAPABILITIES

AIRCRAFT SYSTEMS SIMULATION, AIRBORNE SEARCH & RESCUE, INERTIAL  
NAVIGATION TECHNOLOGY, AIR VEHICLE TECHNOLOGY (STRUCTURES, MATERIALS,  
FLIGHT DYNAMICS, PERFORMANCE, FLIGHT CONTROL) AIRBORNE ASW SYSTEMS,  
DEVELOP & INTEGRATION OF AIRBORNE SYSTEMS INCLUDING ELECTRONIC  
SURVEILLANCE & COUNTER MEASURES, COMMUNICATIONS, NAVIGATION INFORMATION  
PROCESSING & DISPLAY, ENVIRONMENTAL SENSING (ELECTROMAGNETIC/MAGNETIC,  
ACOUSTIC, ELECTRO-OPTIC, & PHOTOGRAPHIC), A/C SUPPORT SYSTEMS, A/C COST  
METHODLOGY AND LOGISTICS, AEROSPACE MEDICINE AND AVIATION PHYSIOLOGY  
AND SUPPORT TO OTHER ACTIVITIES AS DIRECTED

INSTALLATION: AIR PROPULSION CENTER

TRENTON, N.J.

C.O. CPT. E.J. STURM

DIR. MR. D.R. SNYDER

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	42.429	63.160
TOTAL PROCUREMENT	1.287	3.089
TOTAL O&M	0.077	0.167
TOTAL OTHER	0.416	0.767
TOTAL ANNUAL LAB	44.209	67.183
 TOTAL INHOUSE	 30.411	 44.974
TOTAL INHOUSE RDT&E	28.667	41.076
ANNUAL OPERATING COST	9.937	13.125

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PEBS	TOTAL PROF	NON- PROF
MILITARY	8	1	7	1
CIVILIAN	645	1	186	459
TOTAL	653	2	193	460

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
68	488.300	27.962	92.816	609.168	52.088	11.073

...MISSION

PROVIDE NAVAIR & FLEET COMPLETE TECHNICAL & ENGINEERING SUPPORT FOR AIR-BREATHING PROPULSION SYSTEMS, ACCESSORIES, COMPONENTS AND FUELS & LUBES. MANAGE AND PERFORM APPLIED R&D ON NEW PROPULSION SYSTEMS; EVALUATE NEW SYSTEMS. BY T&E ASSURE MISSION ACCOMPLISHMENT AND SOLVE FLEET PROBLEMS.

...CURRENT IMPORTANT PROGRAMS

CRUISE MISSILE ENGINE (F107/F112) WARRANTY/DEVELOPMENT TESTING  
 PETROLEUM & SYNTHETIC AIRCRAFT ENGINE FUEL DEVELOPMENT, TEST & EVAL  
 TF30 ENGINE STALL RECOVERY & AFTERBURNER RUMBLE INVESTIGATION  
 F402 ACCELERATION/STAGNATION AND SURGE MARGIN INVESTIGATION  
 JOINT TECHNOLOGY DEMONSTRATOR ENGINE CONTRACT MANAGEMENT/AIR FORCE COORD

...FUNCTIONS/EQUIPMENT/CAPABILITIES

THREE LARGE ALTITUDE CELLS, TWO LARGE SEA LEVEL CELLS AND FOUR SMALL ALTITUDE CELLS PROVIDE ENVIRONMENTAL AND FLIGHT SIMULATION CAPABILITY OF SEA LEVEL TO 100000 FEET; MINUS 65 TO PLUS 650 DEGREES F; FLIGHT SPEEDS FROM ZERO TO MACH 3 TO TEST TURBOJET/FAN AND TURBOPROP/SHAFT ENGINES. FIVE TEST ROOMS TO TEST STARTERS, ACCESSORIES AND AUXILIARY POWER UNITS. TEN TEST ROOMS AND CHEMISTRY LAB USED FOR R&D ON FUELS, LUBES AND BEARINGS. SPECIAL TEST FACILITIES ARE ROTOR SPIN FACILITY, HELICOPTER TRANSMISSION TEST FACILITY, GYRO RIG AND ENGINE TURNABLE. FACILITIES ARE USED FOR R&D ON ADVANCED FUELS AND LUBRICATING OILS, OIL-WETTED ENGINE COMPONENTS, AIR POLLUTION, LOW CYCLE FATIGUE, CONTAINMENT, NOISE AND I/R PROGRAMS. NAPC QUALS OILS, MANAGES NAVY EXPLORATORY AND ADV DEVEL PRGMS, PROVIDES ADMN & TECH DIR TO SELECTED NAVAIR CONTRACTS.

INSTALLATION: AIR TEST CENTER

PATUXENT RIVER, MD.

C.O RADM E. J. HOGAN

TECH. DIR. MR. J. F. LYNCH

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	130.269	127.791
TOTAL PROCUREMENT	37.561	23.289
TOTAL O&M	26.776	30.256
TOTAL OTHER	66.961	61.583
TOTAL ANNUAL LAB	261.567	242.919
TOTAL INHOUSE	164.651	153.762
TOTAL INHOUSE RDT&E	92.882	91.115
ANNUAL OPERATING COST	87.081	85.433

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	1422	5	294	1128
CIVILIAN	2119	6	486	1633
TOTAL	3541	11	780	2761

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
7156	88.619	425.407	4681.507	5195.533	158.478	65.096

...MISSION

CONDUCT RDT&E ON AUTOMATIC TEST EQUIP, COMPUTERS & SOFTWARE, HUMAN FACTRS, RELIABLT & MAINTABLT, DYNAMIC INTERFACE, & SYS INTEGRATION, PRIN SITE FOR FULL SCALE DEV BY CONTR OF NAV & MARCORPS AIRCRAFT, GRND SUPP EQUIP & TRNG SIMULATORS. TRNG NAV TEST PILOTS. DEV AIRCRAFT TEST TECHNIQ, TECHNOL & FAC.

...CURRENT IMPORTANT PROGRAMS

F/A-18A, LAMPS AND AV-8B FULL SCALE DEVELOPMENT AND SERVICE SUITABILITY TESTING. CONDUCT TECHEVALS AND BIS TRIALS FOR F/A-18A, F-14, F-4, A-4, A-7, A-6, EA-6, AV-8B, P-3, S-3, E-2, EC-130, AH-1, CH-1, H-46, H-53, H-2, H-3 AND SH-60.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

LARGE, INSTRUMENTED, RESTRICTED AIRSPACE PLUS DIRECT ACCESS TO INSTRUMENTED OFFSHORE WARNING AREAS; REAL-TIME RANGE AND AIRCRAFT TELEMETRY DATA PROCESSING AND DISPLAY; SIMULATION CAPABILITIES FOR AIRBORNE WEAPONS SYSTEMS AND SOFTWARE; ENVIRONMENTAL STIMULATION CAPABILITIES FOR UNDER-WATER ACOUSTICS, ELECTRONIC WARFARE AND ELECTROMAGNETIC VULNERABILITY AND EFFECTS TESTING; AIRCRAFT GUN FIRING TUNNEL; ELECTRICAL SYSTEM TEST FACILITY; CONTROLLED ENVIRONMENT ENGINE, HYDRAULIC, FUEL, ENVIRONMENTAL, AND ELECTRICAL TEST CAPABILITY; SHIPBOARD CATAPULT AND ARRESTING GEAR; ANTENNA TEST RANGE; LAND, SEA AND AIR TARGETS; SHIP GROUND STATION FOR LAMPS TESTING; ELECTROMAGNETICALLY SHIELDED HANGAR; PRECISION ELECTRO-OPTICAL TARGET; EXTENSIVE AIRCRAFT AND GROUND-BASED INSTRUMENTATION POOL AIDED BY DEVELOPMENT, FABRICATION AND INSTALLATION FACILITIES.

INSTALLATION: ATLANTIC FLEET WEAPONS TRAINING FACILITY

ROOSEVELT ROADS, P.R.

C.O. CAPT. D. A. GERRISH, JR.

TECH. DIR. MR. THOMAS RAMIPEZ

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	0.300	0.150
TOTAL PROCUREMENT	7.263	0.821
TOTAL O&M	20.216	19.533
TOTAL OTHER	3.962	4.258
TOTAL ANNUAL LAB	31.741	24.767
TOTAL INHOUSE	4.765	4.839
TOTAL INHOUSE RDT&E	0.000	0.005
ANNUAL OPERATING COST	1.514	1.336

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	81	0	12	69
CIVILIAN	34	0	20	14
TOTAL	115	0	32	83

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
3696	0.000	14.957	182.152	197.109	13.810	115.000

...MISSION

TO OPERATE, MAINTAIN AND DEVELOP WEAPONS TRAINING FACILITIES AND SERVICES IN DIRECT SUPPORT OF THE TRAINING OF FLEET FORCES AND OTHER ACTIVITIES AND FOR THE DEVELOPMENT, TEST AND EVALUATION OF WEAPONS SYSTEMS.

...CURRENT IMPORTANT PROGRAMS

GPS/SMILS TESTS  
CNO PROJECT 155 P-3 UPDATE  
ACCURAD TESTS  
DEEP DRONE NAVIGATIONAL DEVELOPMENT  
TOWED ARRAY SYNCHRONOUS PINGER.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

NAVY'S LARGEST TRAINING FAC FOR ATLANTIC FORCES WITH 202,000 SQ.MI. COMBINED SEA AREA FOR AIR, SURFACE AND SUBSURFACE WARFARE OPERATIONS. CENTRAL COMMAND AND CONTROL SYSTEM WITH NTDS LINKING, REALISTIC EW ENVIRONMENT, SURVEILLANCE/TRACK RADARS, AIR/SURFACE TARGETS PRESENTATION, LARGE SCREEN DISPLAY SYSTEM FOR OPS MONITOR/CONTROL, EVENT RECONSTRUCTION, AND VARIOUS OTHER INSTRUMENTATION SYS. FLTAC FIELD STATION FOR MISSILE ANALYSIS AND EVALUATION. AIR TO GRND AND SURFACE TO SURFACE WEAPONS TARGET FACILITIES FOR CONVENTIONAL AIRCRAFT ORDNANCE DELIVERY, STRAFING AND NAVAL GUNFIRE WITH RADAR, TV BOMB SCORING SYSTEM AND OTHER SCORING/SPOTTING SYSTEMS. UNDERWATER RANGE FOR PRECISION SURFACE AND SUBSURFACE TRACKING, WSATS AND FORACS. NAVSTA PROVIDES FOR AIRCRAFT/SHIPS LOGISTICS SUPPORT, BOQ AND REQ.



INSTALLATION: BIODYNAMICS LABORATORY

NEW ORLEANS LA

C.O. CAPT. L. E. WILLIAMS

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	4.014	3.847
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	0.727	0.709
TOTAL ANNUAL LAB	4.741	4.556
TOTAL INHOUSE	3.885	3.619
TOTAL INHOUSE RDT&E	3.158	2.910
ANNUAL OPERATING COST	0.660	0.824

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	34	3	7	27
CIVILIAN	51	6	27	24
TOTAL	85	9	24	51

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1	35.702	24.452	0.000	60.154	2.070	0.279

...MISSION

CONDUCT BIOMED RSCH ON EFFECTS OF MECH FORCES (MOTION, VIBRATION, IMPACT) ENCOUNTERED IN SHIPS AND AIRCRAFT BY NAVY PERSONNEL; ESTABLISH HUMAN TOLERANCE LIMITS FOR THESE FORCES; DEVELOP PREVENTIVE AND THERAPEUTIC METHODS TO PROTECT PERSONNEL FROM DELETERIOUS EFFECTS OF SUCH FORCES.

...CURRENT IMPORTANT PROGRAMS

LONG-TERM EFFECTS OF BIODYNAMIC STRESS EXPERIMENTS.  
PHYSIOLOGICAL AND PERFORMANCE EFFECTS OF SHIP MOTION ON CREW MEMBERS.  
DETERMINATION OF HUMAN DYNAMIC RESPONSE TO IMPACT ACCELERATION.  
EFFECTS OF IMPACT ACCELERATION ON HUMAN NEUROPHYSIOLOGY.  
DEVELOPMENT OF AND VALIDATION OF HUMAN ANTHROPOMORPHIC MANIKINS.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

IMPACT FACILITY 1 MEGA N THRUST ACCELERATOR 213 M ENVIRONMENTALLY EN-CLOSED TRACK. 17.8K N THRUST VERTICAL ACCELERATOR. XRAY CINEMATOGRAPHY ELECTRODYNAMIC MOTION EXCITORS. C210 SHAKER. SHIP MOTION GENERATOR. 22 CHANNEL INERTIA DATA ACQUISITION SYSTEM AND HIGH SPEED CAMERAS EQUIPPED FOR HUMAN AND ANIMAL EXPERIMENTS IN UNUSUAL FORCE ATMOSPHERIC ACOUSTICAL ELECTROMAGNETIC ENVIRONMENTS.

INSTALLATION: BIOSCIENCES LABORATORY

OAKLAND, CA.

C.O. CDR. J. E. SIPPEL

SCI. DIR. DR. D. KINGSBURY

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	2.900	2.830
TOTAL PROCUREMENT	0.000	0.000
TOTAL Q&M	0.000	0.000
TOTAL OTHER	0.309	0.282
TOTAL ANNUAL LAB	3.209	3.112
TOTAL INHOUSE	3.209	3.112
TOTAL INHOUSE RDT&E	2.900	2.830
ANNUAL OPERATING COST	0.779	1.089

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	9	4	5	4
CIVILIAN	6	0	0	6
TOTAL	15	4	5	10

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
5	77.625	8.731	34.646	121.002	1.000	5.521

...MISSION

THE MISSION OF THE BIOSCIENCES LABORATORY IS TO CONDUCT RESEARCH AND DEVELOPMENT IN THE BIOSCIENCES RELATED TO THE NEEDS OF THE NAVAL ESTABLISHMENT.

...CURRENT IMPORTANT PROGRAMS

IMMUNE MECHANISMS OF INFECTIOUS DISEASES  
RAPID DETECTION OF MICROORGANISMS  
RECOMBINANT DNA TECHNOLOGY  
TOXIC EFFECTS OF ORGANOMETAL COMPOUNDS IN THE MARINE ENVIRONMENT  
TOXIC PROPERTIES OF NAVY RELEVANT CHEMICALS AND WASTES

...FUNCTIONS/EQUIPMENT/CAPABILITIES

EQUIPMENT INCLUDES CLASS III CONTAINMENT FACILITIES FOR HANDLING PATHOGENIC VIRUS AND BACTERIA, CONTINUOUS FLOW LIQUID WASTE DECONTAMINATION UNIT, PROCESS AIR DECONTAMINATION SYSTEM, ELECTRON SPIN RESONANCE AND NUCLEAR MAGNETIC RESONANCE SPECTROMETERS, ZILOG COMPUTER SYSTEM, SPECTROPHOTOMETERS, SPECTROFLUOROMETER AND SCANNING ELECTRON MICROSCOPES. THE EQUIPMENT IS CONTINUOUSLY BEING MODIFIED AND EXPANDED ACCORDING TO CURRENT PROJECTS. NBL IS A CONTRACT BASIC RESEARCH LAB WITH THE UCB; MOST SCIENTIFIC & TEC PERSONNEL ARE UCB EMPLOYEES.

INSTALLATION: CIVIL ENGINEERING LABORATORY

PORT HUENEME, CA.

C.O. CAPT. NORMAN D. FALK

TECH. DIR. DR. DONALD L. BIRKIMER

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	32.741	36.390
TOTAL PROCUREMENT	0.448	0.310
TOTAL O&M	3.134	2.760
TOTAL OTHER	2.735	0.850
TOTAL ANNUAL LAB	39.058	40.310
TOTAL INHOUSE	21.108	21.349
TOTAL INHOUSE RDT&E	17.047	18.973
ANNUAL OPERATING COST	5.641	5.705

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	16	0	7	9
CIVILIAN	345	27	153	192
TOTAL	361	27	160	201

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
32	112.965	77.463	16.493	206.921	7.300	4.853

...MISSION

MISSION OF LABORATORY IS TO BE THE PRINCIPAL RDT AND E CENTER FOR NAVY SHORE FACILITIES, FIXED SURFACE AND SUBSURFACE OCEAN FACILITIES AND FOR THE NAVY AND MARINE CORPS CONSTRUCTION FORCES.

...CURRENT IMPORTANT PROGRAMS

NAVY SHORE FACILITIES SUPPORT. NAVY SEAFLOOR INSTALLATIONS, AMPHIBIOUS AND ADVANCED BASE TECHNOLOGY. ENVIRONMENTAL PROTECTION. ORGANIC MATERIALS. ENERGY TECHNOLOGY. DEEP OCEAN TECHNOLOGY. OFFSHORE BULK FUEL TRANSFER. INDEPENDENT EXPLORATORY DEVELOPMENT. INDEPENDENT RESEARCH. CONTAINER OFF-LOADING TRANSFER SYSTEM (COTS). MARINE CORPS. ARMY.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

PRESSURE VESSEL FACILITY WITH 9, 18, 34, 72, INCH VESSELS SIMULATION PRESSURES TO OCEAN DEPTHS OF 20,000 FEET. DIVING LOCKER AND EQUIPMENT FOR 10 DIVERS. SEA FLOOR SOILS LAB. ENERGY TEST BED. CLASS G PHOTO LAB. PHYSICAL SECURITY LABS. CHEMISTRY LAB. INSTRUMENTATION LAB. WARPING TUG ELECTROMAGNETIC FACILITY. CORROSION AND METALURGICAL LABS. ENVIRONMENTAL RESEARCH LAB. CDC 8090 TERMINAL WITH HIGH SPEED READER AND LINE PRINTER. DIGITAL MAG TAPE. PEN PLOTTER. CURRENT SESOR LAB. ENERGY MCNITORING CAPABILITY. PROTOTYPE MACHINE, WELDING, CARPENTER, AND RIGGING SHOPS. SHALLOW OCEAN SIMULATION FACILITY. MATERIAL TESTING LAB. ELECTRICAL SYSTEMS LAB. CONCRETE MIXING LAB. AGGREGATE PROCESSING LAB. DATA PROCESSING CENTER.

# INSTALLATION: CLOTHING & TEXTILE RESEARCH FACILITY

NATICK, MA.

C.O. CDR. JAMES C. ROBERTSON

PROGRAM DATA BY FISCAL YEAR (MILLION \$)		
PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	2.655	3.116
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	1.253	1.381
TOTAL OTHER	0.056	0.290
TOTAL ANNUAL LAB	3.964	4.787
TOTAL INHOUSE	3.659	3.788
TOTAL INHOUSE RDT&E	2.355	2.117
ANNUAL OPERATING COST	0.155	0.126

PERSONNEL DATA (END OF FY 1983)				
PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	1	0	1	0
CIVILIAN	56	1	36	20
TOTAL	57	1	37	20

SPACE AND PROPERTY						
ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1	9.160	10.000	3.600	22.760	0.865	0.746

## ...MISSION

CONDUCT RESEARCH DEVELOPMENT TEST & EVALUATION & PROVIDE ENGINEERING SUPPORT IN CLOTHING TEXTILES & RELATED FIELDS ASSOCIATED WITH SERVICE CLOTHING & ENVIRONMENTAL PROTECTIVE CLOTHING.

## ...CURRENT IMPORTANT PROGRAMS

BATTLE DRESS CLOTHING  
MATERIALS INVESTIGATIONS TO MEET NAVY CLOTHING REQUIREMENTS  
PROTECTIVE CLOTHING FOR HAZARDOUS ENVIRONMENTS  
LIFE SUPPORT SYSTEMS FOR PROTECTIVE CLOTHING  
OCCUPATIONAL & SAFETY FOOTWEAR.

## ...FUNCTIONS/EQUIPMENT/CAPABILITIES

HYDRO-ENVIRONMENT TEMPERATURE LAB, AIR CHAMBER-MARINE TANK REPRODUCES AIR-SEA TEMP CONDITIONS FOR WATER IMMERSION PHYSIOLOGY & BUOYANCY TESTS  
ENVIRONMENTAL TEST CHAMBER FOR EVALUATING PROTECTIVE CLOTHING UNDER WORK STRESS & EXTREME TEMPERATURES.  
INSTRUMENTED THERMAL MANIKIN FOR DETERMINING THERMAL INSULATION OF CLOTHING IN WET & DRY ENVIRONMENTS.  
THERMAL FLAMMABILITY APPARATUS FOR CONDUCTION FLAME RETARDANCY.  
FLAMMABILITY & HEAT RESISTANCE MATERIAL TESTING.  
CHEMICAL & PHYSICAL TESTING EQUIPMENT FOR CONDUCTING RDT&E ON FABRICS, YARNS, FIBERS, LEATHER, PLASTICS, RUBBER, DYES, & FINISHES.  
SEWING MACHINES & PATTERN DRAFTING FOR DEVELOPING GARMENTS.

INSTALLATION: COASTAL SYSTEMS CENTER

PANAMA CITY, FL.

C.O. CAPT. C. C. KING

TECH. DIR. MR. G. C. DILWORTH

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	45.215	52.152
TOTAL PROCUREMENT	18.192	18.350
TOTAL O&M	9.149	10.000
TOTAL OTHER	8.171	7.415
TOTAL ANNUAL LAB	80.727	87.917
TOTAL INHOUSE	40.132	49.987
TOTAL INHOUSE RDT&E	24.846	29.322
ANNUAL OPERATING COST	13.607	20.577

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	116	0	13	103
CIVILIAN	647	27	364	283
TOTAL	763	27	377	386

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
648	342.248	47.291	363.488	753.027	47.942	22.481

...MISSION

TO BE THE PRINCIPAL NAVY RDT&E CENTER FOR MINE AND UNDERSEA COUNTER-MEASURES, SPECIAL WARFARE, AMPHIBIOUS WARFARE, DIVING AND OTHER NAVAL MISSIONS THAT TAKE PLACE PRIMARILY IN THE COASTAL REGIONS.

...CURRENT IMPORTANT PROGRAMS

MINE AND UNDERSEA COUNTERMEASURES  
TORPEDO AND SONAR COUNTERMEASURES  
SHIP/AIRBORNE MINE COUNTERMEASURES COMBAT SYSTEM INTEGRATION  
DIVING, SALVAGE, AND SPECIAL WARFARE  
AMPHIBIOUS WARFARE

...FUNCTIONS/EQUIPMENT/CAPABILITIES

FACILITIES INCLUDE- OCEAN SIMULATION FAC TO 2250' DEPTH. HYDROSPACE LAB. SWIMMER/DIVER R&D FAC. GAS ANALYSIS LAB. SONAR TEST BED. MAGNETIC TARGET DETECTION & CLASSIFICATION RANGE. MAGNETIC LAB. OPTICAL POSITIONING SYS. TWO UNMANNED OFFSHORE SENSOR/INSTRUMENTATION PLATFORMS. CALIBRATION AND STANDARDS FAC. MECHANICAL CALIBRATION LAB. CABLE TEST FAC. ACOUSTIC TEST FAC. TRANSDUCER LAB. PRECISION ACOUSTIC TANK. ACOUSTIC ANAL FAC. SYS DEV AND TEST FAC. LASER LAB. ELECTRONIC TRACKING RANGE, PORTABLE TRACKING & POST RUN ANALYSIS SYS. COUNTERMEASURES EVALUATOR IN REAL-TIME SIMULATION BURROUGHS 6810 DIGITAL COMPUTER AND ASSOCIATED DATA COMMUNICATIONS SYS. ENVIRONMENTAL MONITORING FAC. SONAR PROCESSING FAC. INTERACTIVE GRAPHICS SYS. PIER SPACE & BOATS TO INCLUDE RESEARCH VESSELS ATHENA I&II, MSO-443 USS FIDELITY. INDUSTRIAL SHOPS. HELIPORT COMPLEX WITH 2 RH53D & 2 UH1E.

INSTALLATION: DAVID W. TAYLOR SHIP R&D CENTER

BETHESDA, MD.

C.O. CAPT. B. F. TIBBITTS

TECH. DIR. DR. A. POWELL

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	164.647	134.660
TOTAL PROCUREMENT	18.997	15.456
TOTAL O&M	31.935	26.912
TOTAL OTHER	9.447	14.754
TOTAL ANNUAL LAB	225.056	241.782
TOTAL INHOUSE	113.757	126.692
TOTAL INHOUSE RDT&E	87.503	98.845
ANNUAL OPERATING COST	47.358	47.283

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	76	1	23	53
CIVILIAN	2478	118	1206	1272
TOTAL	2554	119	1229	1325

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
325	1705.165	99.405	328.172	2132.742	73.770	88.446

...MISSION

TO BE THE PRINCIPAL NAVY RESEARCH, DEVELOPMENT, TEST, AND EVALUATION (RDT&E) CENTER FOR NAVAL VEHICLES AND LOGISTICS AND TO PROVIDE RDT&E SUPPORT TO THE U.S. MARITIME ADMINISTRATION AND THE MARITIME INDUSTRY.

...CURRENT IMPORTANT PROGRAMS

SURFACE SHIP AND SUBMARINE SILENCING (ACOUSTIC/NON-ACOUSTIC/MACHINERY), SURFACE SHIP SURVIVABILITY AND TOPSIDE STRUCTURES, PROPULSOR DEVELOPMENT (HYDRODYNAMICS/STRUCTURES/ACOUSTICS), SUBMARINE PRESSURE HULL AND NON-PRESSURE HULL (STRUCTURES/MATERIALS), AERODYNAMICS (JET-VANE YAW CONTROL/X-WING ROTOR SYS/CIRCULATION CONTROL)

...FUNCTIONS/EQUIPMENT/CAPABILITIES

MAJOR EQUIPMENT/FACILITY CAPABILITIES: SHALLOW AND DEEP WATER TOWING BASINS, MANEUVERING AND SEAKEEPING BASIN, WIND TUNNELS, ANECHOIC FLOW FACILITY, WATER TUNNELS, STRUCTURAL EVALUATION FACILITY, UNDERWATER EXPLOSIONS LABORATORY BARGE, PRESSURE TANKS, SUBMARINE INTERNAL FLUID DYNAMICS FACILITY, METALLURGICAL CHARACTERIZATION AND EVALUATION FACILITY, WELDING DEVELOPMENT LABORATORY, ENVIRONMENTAL PROTECTION LABORATORY, PAINT DEVELOPMENT LABORATORY, MACHINERY DEVELOPMENT LABORATORY, FUELS LABORATORY, FABRICATION TECHNOLOGY LABORATORY, SHOCK AND VIBRATION FACILITY, ELECTRIC PROPULSION TEST CRAFT, DEEP OCEAN TECHNOLOGY HIGH-PRESSURE TEST FACILITY, TURBO-ELECTRIC PROPULSION LABORATORY, NOISE MEASUREMENT FACILITY.

INSTALLATION: DENTAL RESEARCH INSTITUTE.

GREAT LAKES, IL.

C.O. CAPT. G. E. CLARK

SCI. DIR. DR. I. R. SHKLAIR

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	0.874	0.924
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	0.859	0.848
TOTAL ANNUAL LAB	1.733	1.772
TOTAL INHOUSE	1.698	1.736
TOTAL INHOUSE RDT&E	0.839	0.838
ANNUAL OPERATING COST	0.507	0.601

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	29	8	13	16
CIVILIAN	15	4	6	9
TOTAL	44	12	19	25

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1	21.264	6.001	9.318	36.583	0.000	1.032

...MISSION

TO CONDUCT RESEARCH&DEVELOPMENT TEST AND EVALUATION IN DENTAL AND ALLIED SCIENCES WITH PARTICULAR EMPHASIS ON PROBLEMS OF DENTAL AND ORAL HEALTH IN NAVY AND MARINE CORPS POPULATIONS AND ON PROBLEMS OF FLEET AND FIELD DENTISTRY.

...CURRENT IMPORTANT PROGRAMS

THE PATHOGENESIS OF ORAL DISEASES.  
DEVELOPMENT OF METHODS FOR PREVENTING ORAL DISEASES & DENTAL EMERGENCY.  
COMPUTER ASSISTED DIAGNOSIS OF DENTAL EMERGENCIES.  
DESIGN AND DEVELOPMENT OF AN ORAL EPIDEMIOLOGY INFO.SYSTEMS  
DEVELOPMENT OF A MARINE CORPS EXPEDITIONARY DENTAL SHELTER.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

AMINO ACID ANALYZER/ATOMIC ASORPTION UNIT/LIQUID SCINTILLATION COUNTER/  
MIN COMPUTER/GAS CHROMATOGRAPH UNIT/PHOTOMICROSCOPE/FIVE DENTAL UNITS/  
SIX DENTAL CHAIRS/ELECTRON MICROSCOPE/CRYOMICROTOME/DIAZO PROCESSOR/  
SPECTROPHOTOMETERS/ORAL SURGERY CHAIR/THERMAL BALANCE/VIVARIUM/ANIMAL  
SURGERY ROOM/XRAY EQUIPMENT/RPM INSTRUMENTS/SOUND METERS/ANAEROBIC CHAM-  
BER/SHAKERS/INCUBATORS/CENTRIFUGES/BIOLOGICAL SAFETY CABINET/FRACTIONA-  
TORS/RECORDERS/FIELD DENTAL EQUIPMENT/PROTOTYPE SHOPS/PROTOTYPE MARINE  
CORPS EXPEDITIONARY DENTAL SHELTER/PHOTO LAB/OSCILLISCOPE/EQUIPMENT  
REPAIR SHOP/TISSUE CULTURE.

INSTALLATION: ENVIRONMENTAL PREDICTION RESEARCH FACILITY MONTEREY, CA.

CO. CAPT. K. L. VAN SICKLE DIR. OF RSCH. DR. A. WEINSTEIN

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	5.177	5.639
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.613	0.462
TOTAL OTHER	0.486	0.429
TOTAL ANNUAL LAB	6.276	6.530
TOTAL INHOUSE	2.849	2.987
TOTAL INHOUSE RDT&E	2.265	2.359
ANNUAL OPERATING COST	1.174	1.033

PERSONNEL	PERSONNEL DATA (END OF FY 1983)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	14	2	5	9
CIVILIAN	32	8	27	5
TOTAL	46	10	32	14

ACRES	SPACE AND PROPERTY				COST (MILLION \$)	
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
0	5.446	14.040	5.098	24.584	0.000	1.355

...MISSION

CONDUCT RESEARCH & DEVELOPMENT DIRECTED TOWARD PROVIDING OBJECTIVE LOCAL REGIONAL AND GLOBAL ENVIRONMENTAL ANALYSIS & PREDICTION TECHNIQUES. PROVIDE PLANNING, MODELING & EVALUATION SERVICES TO DETERMINE THE EFFECT OF ENVIRONMENTAL ELEMENTS ON NAVAL WEAPONS SYSTEMS.

...CURRENT IMPORTANT PROGRAMS

DEVELOP SYSTEM FOR PROCESS/DISPLAY OF ENVIRONMENTAL SATELLITE DATA  
DEVELOP COMPUTER MODELS WHICH ANALYZE/ASSIMILATE ATMOSPHERIC DATA  
DEVELOP TECHNIQUES PREDICT/DIAGNOSE ATMOS EFFECTS ON WEAPONS SYSTEMS  
DEVELOP OBJECTIVE LOCAL/REGIONAL ATMOS ANALYSIS/PREDICTION TECHNIQUES  
DEVELOP SYNOPTIC/SUBSYNOPTIC & MESOSCALE ATMOS PREDICTION MODELS

...FUNCTIONS/EQUIPMENT/CAPABILITIES

CAPABILITY OF RECEIVING, ENHANCING AND ANALYZING REMOTEL SENSED ATMOS DATA.  
CAPABILITY OF BUILDING, ANALYZING AND MODIFYING GLOBAL, REGIONAL AND LOCAL WEATHER MODELS  
CAPABILITY TO DEVELOP ATMOS PREDICTION AIDS FOR USE BY NON-GRADUATE METEOROLOGICAL PERSONNEL  
ECLIPSE S250 COMPUTER ACCESS TO CYBER 203 AND 175 COMPUTERS



INSTALLATION: EXPLOSIVE ORDNANCE DISPOSAL FACILITY

INDIAN HEAD, MD.

C.O. CDR. R. L. MASTEN

TECH. DIR. MR. L. A. DICKINSON

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	9.404	11.478
TOTAL PROCUREMENT	1.554	8.900
TOTAL O&M	1.084	1.114
TOTAL OTHER	2.801	5.486
TOTAL ANNUAL LAB	14.843	26.978
TOTAL INHOUSE	10.530	21.545
TOTAL INHOUSE RDT&E	5.617	6.680
ANNUAL OPERATING COST	4.541	5.209

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	40	0	9	31
CIVILIAN	164	3	47	117
TOTAL	204	3	56	148

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1172	71.578	22.176	96.648	184.397	5.987	4.201

...MISSION

CONDUCT RESEARCH DEVELOPMENT TEST AND EVALUATION CONCERNING BOTH THE DISPOSAL AND RENDERING-SAFE PROCEDURES FOR CONVENTIONAL AND SPECIAL WEAPONS, GUIDED MISSILES, UNDERWATER WEAPONS, EXPLOSIVES, BIO AND CHEM. MUNITIONS, BOTH U.S. AND FOREIGN, PLUS THE REQUIRED TOOLS AND EQUIPMENT.

...CURRENT IMPORTANT PROGRAMS

DEVELOPMENT OF RENDER SAFE AND DISPOSAL TOOLS FOR CONVENTIONAL MUNITIONS  
DEVELOPMENT OF RENDER SAFE AND DISPOSAL PROCEDURES  
IMPROVISED NUCLEAR DEVICE COUNTERMEASURES  
TERRORIST DEVICE COUNTERMEASURES  
EXPLOSIVE RANGE CLEARANCE TECHNIQUES.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

DEVELOP EXPLOSIVE ORDNANCE DISPOSAL -EOD- PROCEDURE, PREPARE AND PUBLISH EOD PUBLICATIONS FOR JOINT-SERVICE USE. CONDUCT EXP. AND ADV. DEVELOPMENT LEADING TO SPECIALIZED TOOLS AND EQUIP. NEEDED TO LOCATE, IDENTIFY, RECOVER, RENDER-SAFE AND DISPOSE OF ALL TYPES OF EXPLOSIVE ORDNANCE. PREPARE AND MAINTAIN DOCUMENTATION FOR EOD, TOOLS AND EQUIP. CONDUCT FIRST ARTICLE INSPECTION ON EOD TOOLS BEING PRODUCED FOR ALL SERVICES. CONDUCT IN-SEARCH ENGINEERING FUNCTIONS FOR EOD AND SWIMMER WEAPONS SYSTEM TOOLS. CONDUCT INITIAL EVALUATION OF FOREIGN EXPLOSIVE ORDNANCE. MAINTAIN STOCK AND ISSUE EOD PUBLICATIONS FOR JOINT-SERVICE USE. CAPABILITY OF TESTING EOD TOOLS TO A DEPTH OF 400 FT IN A DIVING CHAMBER. CAPABILITY OF ANALYZING HIGH SPEED EVENTS WITH FLASH X-RAYS AND PHOTOS

INSTALLATION: HEALTH RESEARCH CENTER

SAN DIEGO, CA.

C.O. CAPT. J. E. LANG

CH. SCI. DR. L. C. JOHNSON

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	3.239	2.876
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	1.005	1.011
TOTAL ANNUAL LAB	4.244	3.887
TOTAL INHOUSE	3.563	3.256
TOTAL INHOUSE RDT&E	2.558	2.245
ANNUAL OPERATING COST	1.394	0.993

PERSONNEL	PERSONNEL DATA (END OF FY 1983)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	30	11	14	16
CIVILIAN	60	10	24	36
TOTAL	90	21	38	52

ACRES	SPACE AND PROPERTY				COST (MILLION \$)	
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
1	19.052	7.159	0.000	26.211	0.147	1.527

#### ...MISSION

THE EFFECT OF BENZODIAZEPINES ON SLEEP BRAIN ACTIVITY AROUSAL THRESHOLD.  
 BEHAVIOURAL EFFECTS OF AND ADJUSTMENT TO COLD ENVIRONMENTS.  
 EPIDEMIOLOGY IN EMPLOYEES OF NWC CHINA LAKE.  
 EPIDEMIOLOGICAL ANALYSIS OF HLTH & SAFETY IN SELECT NAV OCCUP & ENVRNS.

#### ...CURRENT IMPORTANT PROGRAMS

AN EXPLORATORY STUDY OF RECENT DISASTERS IN THE US NAVY.  
 BIOENERGETICS OF EXERCISE: SUPPLY/UTILIZATION CONTR MECH INVOLV GASTRO.  
 THE EFFECT OF PASSIVE HEATING AND NONAEROBIC EXERCISE ON HEAT TOLERANCE.  
 SOCIOCULTURAL INFLUENCES ON HEALTH AND CAREER OUTCOME FOR US NAVY PERS.  
 EVAL OF ENVIRONMENTAL AIRCRAFT AND INDIVID FACTORS AFFECT AVIATOR PERF.

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

AGE SPECIFIC MORBIDITY AMONG NAVAL AVIATORS.  
 HUMAN PERFORMANCE EFFECT AND PHYSIOLOGICAL ADAPT DURING SUSTAINED OPS.  
 FEASIBILITY OF MEDICAL DATA AUTOMATION UNDER FIELD CONDITIONS.  
 DEVELOP OF STANDARDS FOR OBESITY & PHYSICAL FITNESS AMONG NAVAL PERS.  
 LONG TERM HEALTH EFFECTS AMONG NAVY DIVERS.  
 DEVELOP AND PILOT TESTING OF A NAVY OCCUP HEALTH INFO MONITORING SYSTEM.  
 EFFECTS OF ORG FACTORS ON HEALTH CARE DELIVERY AND UTIL IN NAVY HOSP.  
 DEVELOP AND EVAL OF IMPROVED METHODS FOR THE ID OF INFECT AGENTS OF MIL.

INSTALLATION: MEDICAL RESEARCH INSTITUTE

BETHESDA MARYLAND

C.O. CAPT. L. SPHAR

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	15.149	16.597
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.072	0.004
TOTAL OTHER	5.300	6.324
TOTAL ANNUAL LAB	20.521	22.925
 TOTAL INHOUSE	 19.435	 22.806
TOTAL INHOUSE RDT&E	14.088	15.490
ANNUAL OPERATING COST	7.648	8.878

PERSONNEL	PERSONNEL DATA (END OF FY 1983)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	245	62	78	167
CIVILIAN	171	41	86	85
TOTAL	416	103	164	252

ACRES	SPACE AND PROPERTY				COST (MILLION \$)	
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
4	159.933	11.720	47.210	218.863	7.059	12.673

...MISSION

CONDUCT BASIC & APPLIED RESEARCH & DEVELOPMENT CONCERNED WITH THE HEALTH  
SAFETY & EFFICIENCY OF NAVY AND MARINE CORPS PERSONNEL.

...CURRENT IMPORTANT PROGRAMS

COMBAT CARE TECHNOLOGY WOUND HEALING SHOCK TISSUE TRANSPLANTATION  
MICROBIOLOGY VACCINE DEV RAPID DIAGNOSIS EPIDEMIOLOGY  
HYPERBARIC MEDICINE PHYSIOLOGY TREATMENT SAFETY  
ENVIRONMENTAL STRESS THERMAL ELECTROMAGNETIC TOXIC  
BONE MARROW TRANSPLANTATION STEM CELLS GROWTH FACTORS

...FUNCTIONS/EQUIPMENT/CAPABILITIES

HYPERBARIC RESEARCH FACILITY WITH MAN-RATED HYPERBARIC CHAMBERS.  
HUMAN PHYSIOLOGICAL & HEAT STRESS EQUIPMENT & FACILITIES.  
HUMAN TISSUE PRESERVATION & STORAGE EQUIPMENT & FACILITIES.  
BIOHAZARDOUS MATERIALS HANDLING LAB EQUIPMENT & FACILITIES.  
TOXICOLOGY EVALUATION EQUIP & FACILITIES INCLUDE HYPERBARIC CHAMBERS  
TRANSMISSION & SCANNING ELECTRON MICROSCOPES FLUORESCENT ANTIBODY CELL  
SOFTER & COMPUTERS.  
EXPERIMENTAL ANIMAL FACILITIES ANIMAL HOUSE & OPERATING ROOMS  
LAB EQUIPMENT & FACILITIES FOR BASIC & APPLIED BIOCHEMICAL  
MICROBIOLOGICAL & PSYCHOLOGICAL & TRANSPLANTATION STUDIES

INSTALLATION: MEDICAL RESEARCH UNIT NO.2

MANILA, PHILIPPINES

C.O. CAPT. W. H. SCHROEDER

SCI. DIR. DR. J. H. CROSS

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	2.221	2.381
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	0.890	0.957
TOTAL ANNUAL LAB	3.111	3.338
TOTAL INHOUSE	3.111	3.338
TOTAL INHOUSE RDT&E	2.221	2.381
ANNUAL OPERATING COST	0.693	0.775

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	31	4	20	11
CIVILIAN	58	2	9	49
TOTAL	89	6	29	60

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1	5.550	3.510	4.262	13.262	0.000	0.253

...MISSION

TO CONDUCT RESEARCH AND DEVELOPMENT ON INFECTIOUS DISEASES OF MILITARY IMPORTANCE THAT ARE ENDEMIC OR EPIDEMIC IN THE ASSIGNED GEOGRAPHIC AREAS TO PERFORM SUCH OTHER FUNCTIONS OR TASKS AS MAY BE DIRECTED BY CHIEF, BUREAU OF MEDICINE AND SURGERY.

...CURRENT IMPORTANT PROGRAMS

CONDUCTS RESEARCH ON TROPICAL COMMUNICABLE DISEASES TO INCLUDE MALARIA, AMEBIASIS, PARASITIC DISEASES, ARTHROPOD VECTOR DISEASES & DIARRHEA. EMPHASIS IS ON DIAGNOSIS, PREVENTION, AND TREATMENT OF TROPICAL INFECTIOUS DISEASES AND THEIR GEOGRAPHIC EPIDEMIOLOGY.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

AUTOClaves; LAMINAR FLOW BIOLOGICAL SAFETY CABINETS; AIR AND CO2 INCUBATORS; FLUORESCENT AND COMPOUND MICROSCOPES; DISSECTING MICROSCOPES; ZEISS PHOTOMICROSCOPE; SUPERSPEED- AND ULTRACENTRIFUGES; LIQUID SCINTILLATION COUNTER; COULTER COUNTER; ULTRAFLOW TEMPERATURE FREEZERS; SPECTROPHOTOMETERS; FRACTION COLLECTORS; ELISA READER; IBM 1130 COMPUTER; INSECTORY; ANIMAL PRODUCTION FACILITIES; CELL CULTURE FACILITIES; FACILITIES IN INDONESIA INCLUDE 10000 SQUARE FEET FOR ALL SPACES.

INSTALLATION: MEDICAL RESEARCH UNIT NO.3

CAIRO, EGYPT

C.O. CAPT. CRAIG K. WALLACE SCI. DIR. DR. AFTAB A. ANSARI

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	3.685	4.246
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.124	0.118
TOTAL OTHER	0.909	0.960
TOTAL ANNUAL LAB	4.718	5.324
TOTAL INHOUSE	4.718	5.324
TOTAL INHOUSE RDT&E	3.685	4.246
ANNUAL OPERATING COST	0.970	0.980

PERSONNEL	PERSONNEL DATA (END OF FY 1983)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	29	12	13	16
CIVILIAN	202	17	41	161
TOTAL	231	29	54	177

ACRES	SPACE AND PROPERTY				COST (MILLION \$)	
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
5	89.472	8.962	61.072	159.506	9.054	1.020

...MISSION

TO CONDUCT RESEARCH, DEVELOPMENT, TEST AND EVALUATION RELATING TO THE HEALTH, SAFETY, AND READINESS OF NAVAL PERSONNEL ASSIGNED TO SOUTHWEST ASIA AND AFRICA, AND TO PERFORM SUCH OTHER FUNCTIONS AS MAY BE DIRECTED BY HIGHER AUTHORITY

...CURRENT IMPORTANT PROGRAMS

EPIDEMIOLOGY AND PREVALENCE OF MILITARY RELEVANT INFECTIOUS DISEASES IN SOUTHWEST ASIA AND AFRICA

THERAPY OF INFECTIOUS DISEASE IN SOUTHWEST ASIA

RAPID AND EARLY DIAGNOSIS OF INFECTIOUS DISEASES OF MILITARY IMPORTANCE IN SOUTHWEST ASIA

...FUNCTIONS/EQUIPMENT/CAPABILITIES

LECTURESCOPE MODEL LS-2 WITH VERTICAL ILLUMINATOR, OILFIRED PORTABLE HOT HIGH PRESSURE CLEANER, ROTARY MICROTOME, AUTOMATIC MICROTOME KNIFE SHARPENER, LOW DOSE ANIMAL IRRADIATOR, FREEZING CHAMBER, BIOGARD HOODS, ABSORBANCE MONITOR WITH STAND AND FLOW CELL, REFRIGERATED FRACTION COLLECTOR SYSTEM WITH SAMPLE PROGRAMMER, LABCONCO GLOVE BOX, INCUBATOR SINGLE CHAMBER, ULTRACENTRIFUGE, MICROSCOPE B&L COMPOUND, MICROSCOPE BALPAN, TRINOCULAR MICROSCOPE, MICROSCOPE AO COMPOUND, AMSCO STERILIZER, DAMON/IEC CENTRIFUGE WITH SWINGING BUCKET HEAD, ULTRA LOW REVCOS, FLUORESCENT MICROSCOPES EQUIPPED FOR EPIFLUORESCENCE, DENTAL UNIT, CAVITRON, HIGH PRESSURE LIQUID CHROMATOGRAPH, PROGRAMMABLE CONTROLLER, ELISA READER, ANAEROBIC CHAMBER, LIQUID SCINTILLATION AND GAMMA COUNTERS, ANIMAL PRODUCTION FACILITY, PATIENT WARDS, PUBLIC WORKS FACILITY.

INSTALLATION: OCEAN R & D ACTIVITY

BAY ST. LOUIS, MS.

C.O. CAPT. G. T. PHELPS

TECH. DIR. DR. J. E. ANDREWS

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	46.252	40.789
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.633	0.591
TOTAL OTHER	1.513	1.423
TOTAL ANNUAL LAB	48.398	42.803
TOTAL INHOUSE	20.308	18.034
TOTAL INHOUSE RDT&E	18.341	16.189
ANNUAL OPERATING COST	6.388	7.714

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	16	1	11	5
CIVILIAN	312	76	201	111
TOTAL	328	77	212	116

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
5	51.002	23.881	83.069	157.952	10.048	11.000

...MISSION

TO CARRY OUT A BROAD BASED RDT&E PROGRAM IN OCEAN SCIENCE AND TECHNOLOGY WITH EMPHASIS ON UNDERSTANDING OCEAN PROCESSES THROUGH MEASUREMENT AND ANALYSIS, AND THE EFFECTS OF THIS OCEAN ENVIRONMENT ON NAVY SYSTEMS AND OPERATIONS.

...CURRENT IMPORTANT PROGRAMS

VLF/LOW/MID/HIGH FREQUENCY ACOUSTIC R&D SUPPORTS SURV/TACT WEAPONS SYS DEVELOP/PERFORM. ARCTIC R&D SUPPORTS TORPEDOE/SUB SONAR DEVELOP/PERFORM. SEA STATE/WAVE R&D SUPPORTS HULL DESIGN & WAVE FORECASTING. REMOTE SENSING OCEANOGRAPHY/NUMERICAL MODELING SUPPORT OCEAN FORECASTING. MC&G R&D SUPPORT NAVY/MARINE CORPS/DMA MC&G PRODUCTS DEVELOPMENT.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

WAVE/CURRENT SIMULATION FACILITY, INTERACTIVE DIGITAL SATELLITE IMAGE PROCESSING SYSTEM, REAL TIME SATELLITE DATA RECEIVING CAPABILITY, SEDIMENT PHYSICS/GEOTECHNICAL LABORATORY, VEKA AND VEDABS ACOUSTIC ARRAYS, X-RAY FLUORESCENT, TRANSMISSION/SCANNING MICROSCOPE AND PATTERN ANALYSIS LABORATORY.

INSTALLATION: OCEAN SYSTEMS CENTER

SAN DIEGO, CA.

C.O. CAPT. J. M. PATTON

TECH. DIR. MR. R. M. HILLYE

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	243.232	263.500
TOTAL PROCUREMENT	57.485	47.400
TOTAL O&M	65.876	65.000
TOTAL OTHER	24.907	29.475
TOTAL ANNUAL LAB	391.500	405.375
TOTAL INHOUSE	182.198	189.975
TOTAL INHOUSE RDT&E	121.043	129.800
ANNUAL OPERATING COST	63.329	66.058

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	269	2	49	220
CIVILIAN	2582	181	1382	1200
TOTAL	2851	183	1431	1420

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
2719	1280.660	201.210	210.070	1691.940	53.504	64.599

...MISSION

TO BE THE PRINCIPAL NAVY RESEARCH, DEVELOPMENT, TEST AND EVALUATION CENTER FOR COMMAND CONTROL, COMMUNICATIONS, OCEAN SURVEILLANCE, SURFACE- AND AIR-LAUNCHED UNDERSEA WEAPONS SYSTEMS, AND SUBMARINE ARCTIC WARFARE.

...CURRENT IMPORTANT PROGRAMS

OCEAN SURVEILLANCE SYS WITH SOSUS UPDATE AND MULTI-SENSOR INTEGRATION, COMMAND CONTROL AND COMMUNICATIONS SYS ARCHITECTURE AND ENGINEERING, ADVANCED SURFACE AND AIR LAUNCHED UNDERSEA WEAPONS AND SURFACE ASW SYS, TECHNOLOGY DEVELOPMENTS SUCH AS ADV MARINE BIO SYS, ARCTIC SUB OPS, OCEAN ENGINEERING, ELECTRONIC WARFARE AND ARTIFICIAL INTELLIGENCE.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

CENTER FACILITIES INCLUDE ARCTIC RESEARCH FACILITY; C3 SITE, INCLUDING TACTICAL FLAG COMMAND CENTER (TFCC) AND ADVANCED COMMAND CONTROL ARCHITECTURE TEST BED (ACCAT); OCEAN SURVEILLANCE FACILITY; ACOUSTIC RESEARCH CENTER (ARC) WITH SATELLITE DATA LINKS; INTEGRATED UNDERSEA SURVEILLANCE SYSTEM (IUSS) FACILITY; MICROWAVE AND MILLIMETER WAVE ANTENNA PATTERN RANGE COMPLEX; OCEANOGRAPHIC RESEARCH TOWER; STABLE SEMI-SUBMERGED PLATFORM; UNMANNED TETHERED VEHICLES INCL CURV III, SCAT, AND SNOOPY; USS DOLPHIN, EXPERIMENTAL SUB; TRANSDUCER EVALUATION CENTER; MICRO-ELECTRONICS LAB COMPLEX; SIMULATION AND REAL-TIME COMPUTER FACILITIES FOR DEVELOPMENT OF OCEAN SURVEILLANCE AND ASW SYSTEMS; SHIP MOTION SIMULATOR AND A BIO-SCIENCE FACILITY ENGAGED IN RESEARCH, TRAINING AND HANDLING OF MARINE MAMMALS.

INSTALLATION: OFFICE OF NAVAL RESEARCH

WASHINGTON D.C.

C.O. RADM J. B. MOONEY, JR.      TECH. DIR. DR. M. K. MOSS

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	501.989	450.660
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	103.563	103.750
TOTAL OTHER	4.939	5.171
TOTAL ANNUAL LAB	610.491	564.581
TOTAL INHOUSE	23.249	24.915
TOTAL INHOUSE RDT&E	21.517	23.114
ANNUAL OPERATING COST	15.667	17.030

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	33	5	25	8
CIVILIAN	408	75	97	311
TOTAL	441	80	122	319

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
0	0.000	81.295	2.020	83.315	0.000	0.000

...MISSION

RESPONSIBLE FOR LEADERSHIP OF NAVY RESEARCH PROGRAM, MANAGEMENT AND DIRECTION OF ONR CONDUCTED RDT&E AND OF THE NAVY-WIDE PATENT PROGRAM, DEVELOPMENT OF NAVY-WIDE RDT&E FOR ASN(RES), WORLD-WIDE RESEARCH INFO AND CONTRACT MGMT OF FEDERALLY FUNDED UNIVERSITY RESEARCH.

...CURRENT IMPORTANT PROGRAMS

CONTRACT RESEARCH AND TECHNOLOGY PROGRAMS

NAVY PATENT PROGRAM

NAVY-WIDE RDT&E APPROPRIATION ADMINISTRATION

FOCAL POINT FOR WORLD-WIDE RESEARCH INFORMATION

CONTRACT MANAGEMENT PROGRAM AT EDUCATIONAL INSTITUTIONS.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

ADMINISTRATION OF RESEARCH PROGRAMS IN PHYSICAL SCIENCES, MATHEMATICAL AND INFORMATION SCIENCES, BIOLOGICAL SCIENCES, PSYCHOLOGICAL SCIENCES, ARCTIC AND EARTH SCIENCES, MATERIAL SCIENCES, OCEAN SCIENCE & TECHNOLOGY.

ADMINISTRATION OF TECHNOLOGY PROGRAMS IN NAVAL VEHICLE AND WEAPONS TECHNOLOGY, SENSOR AND CONTROL TECHNOLOGY, ANALYSIS AND SUPPORT. FIELD ACTIVITIES INCLUDE NRL, NORDA, AND NBL. MAINTAINS RESEARCH RESERVE PROGRAM. COORDINATES NAVAL RESEARCH AND PROMOTES COOPERATIVE RESEARCH EFFORTS WITHIN NAVY, OTHER DOD, NSF, NASA, DEPT OF ENERGY AND OTHER GOVERNMENT RESEARCH GROUPS. SUPPORT AND ADMINISTRATION OF NAVAL RESEARCH ADVISORY COMMITTEE.



INSTALLATION: ORDNANCE MISSILE TEST FACILITY

WHITE SANDS, N.M.

C.O. CAPT. J. W. PATTERSON

TECH. DIR. MR. J. P. DOLAN

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	5.116	7.900
TOTAL PROCUREMENT	0.130	1.734
TOTAL O&M	0.180	0.000
TOTAL OTHER	3.904	4.688
TOTAL ANNUAL LAB	9.330	14.322
TOTAL INHOUSE	6.279	3.969
TOTAL INHOUSE RDT&E	3.778	1.770
ANNUAL OPERATING COST	1.596	2.042

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	87	0	3	84
CIVILIAN	60	0	6	54
TOTAL	147	0	9	138

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
95	9.372	25.131	180.078	214.581	5.723	4.049

...MISSION

SUPPORT THE NAVY GUIDED MISSILE AND RESEARCH ROCKET PROGRAMS INCLUDING GROUND AND FLIGHT TESTING. ASSIST JOINT SERVICE LASER GUIDED WEAPONS COUNTERMEASURE TEST. PARTICIPATE IN THE OPERATION OF THE DOD INTEGRATED MISSILE TEST RANGE AT WHITE SANDS

...CURRENT IMPORTANT PROGRAMS

STANDARD MISSILE 1 AND 2/AEGIS FLIGHT TESTING  
CRUISE MISSILE FLIGHT TESTING  
RAM FLIGHT TESTING  
VERTICAL LAUNCHER TESTING  
UPPER ATMOSPHERE RESEARCH ROCKET LAUNCHING

...FUNCTIONS/EQUIPMENT/CAPABILITIES

FLIGHT TEST TERRIER/TARTAR/STANDARD/SAM GUIDED MISSILES AND PROJECTILES  
LAUNCH VARIOUS SOUNDING ROCKETS FOR UPPER ATMOSPHERIC STUDY  
CONDUCT NAVY AIR WEAPONS TESTS  
LAUNCH VARIOUS ROCKETS IN SUPPORT OF NASA PROJECTS  
LAUNCH VARIOUS ROCKETS IN SUPPORT OF AIR FORCE PROJECTS  
CONDUCT VARIOUS DEVELOPMENT TESTS FOR SSM AND SAM PROJECTS  
PROVIDE DRONE SUPPORT AND VANDAL MISSILE HIGH SPEED TARGETS  
ASSIST IN OPEVAL OF CRUISE MISSILE  
5-INCH GUIDED PROJECTILE LAUNCH CAPABILITY  
PROVIDE WARHEAD AND EOD ANALYSIS ARENA

INSTALLATION: PACIFIC MISSILE TEST CENTER

POINT MUGU, CA.

C.O. RADM J. B. WILKINSON

TECH. DIR. MR. K. I. LICHTI

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	210.500	290.121
TOTAL PROCUREMENT	109.480	138.393
TOTAL O&M	104.904	117.383
TOTAL OTHER	61.977	52.066
TOTAL ANNUAL LAB	486.861	597.963
TOTAL INHOUSE	281.056	349.337
TOTAL INHOUSE RDT&E	146.436	202.258
ANNUAL OPERATING COST	68.079	72.949

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	953	10	359	594
CIVILIAN	3805	14	1010	2795
TOTAL	4758	24	1369	3389

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
27084	978.549	341.259	352.077	4851.885	169.270	145.213

...MISSION.

PERFORM DEVELOPMENT TEST AND EVALUATION DEVELOPMENT SUPPORT, AND FOLLOW-ON ENGINEERING, LOGISTIC, AND TRAINING SUPPORT FOR NAVAL WEAPONS, WEAPONS SYSTEMS, AND RELATED DEVICES, AND PROVIDE MAJOR RANGE, TECHNICAL AND BASE SUPPORT FOR NAVY RDT&E, FLEET, AND OTHER DOD AND GOVT USERS.

...CURRENT IMPORTANT PROGRAMS

AIR LAUNCHED, CRUISE MISSILE, & STRATEGIC SYSTEMS DEVELOPMENT SUPT & T&E  
ISE ON AIR LAUNCHED GUIDED WEAPONS AND CONVENTIONAL ORDNANCE.  
EW SYS READINESS & MISSION PERFORMANCE, EWSSA, SUPT EQUIP DEVELOPMENT.  
TARGETS DEVELOPMENT AND LIFE CYCLE TARGETS MANAGEMENT.  
RANGE SYSTEMS DEVELOPMENT.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

LABORATORIES FOR AIRBORNE WEAPONS SYSTEMS INTEGRATION, TEST, AND EVALUATION INCLUDING SOFTWARE SUPPORT AND ELECTRONIC WARFARE SYSTEMS. LABS INCLUDE HARDWARE-IN-THE-LOOP SIMULATION, ENVIRONMENTAL TEST/RELIABILITY GROWTH, ANECHOIC MEASUREMENTS, AND ALL UP ROUND TEST. A 32000 SQ MI SEA TEST RANGE PROVIDES FOR FLIGHT TEST OF AIRCRAFT AND MISSILE SYSTEMS RANGE INSTRUMENTATION INCLUDES C-BAND RADARS, L AND S-BAND TELEMETRY, DATA TRANSMISSION, DISPLAY, AND REDUCTION, AIR AND SEA TARGETS WITH VARIOUS AUGMENTATION, COMMAND CONTROL/FLIGHT TERMINATION, LAUNCH AND RECOVERY, AND COMMUNICATIONS. A 700 SQ MI UNDERWATER RANGE AT BARKING SANDS, HAWAII, PROVIDES FLEET TRAINING SUPPORT IN AIR, SURFACE, AND ASW WARFARE. PMTC AIRCRAFT PROVIDE EXTENSIVE DATA COVERAGE TO TRIDENT PACIFIC TESTS AND TOMAHAWK INLAND FLIGHTS FROM PMTC TO THE UTAH TEST RANGE.

INSTALLATION: PERSONNEL RESEARCH & DEVELOPMENT CENTER

SAN DIEGO, CA.

C.O. CAPT. J. W. RENARD

TECH. DIR. DR. J. W. TWEEDALE

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	17.604	15.253
TOTAL PROCUREMENT	9.000	0.000
TOTAL O&M	3.157	3.215
TOTAL OTHER	2.847	3.025
TOTAL ANNUAL LAB	23.608	21.493
TOTAL INHOUSE	15.941	16.790
TOTAL INHOUSE RDT&E	11.696	11.465
ANNUAL OPERATING COST	4.192	5.224

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	34	4	17	17
CIVILIAN	293	81	208	85
TOTAL	327	85	225	102

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1	64.422	7.137	5.280	76.909	0.545	7.840

...MISSION

PRINCIPAL NAVY RDT&E CENTER FOR MANPOWER, PERSONNEL, EDUCATION, TRAINING AND HUMAN FACTORS AND FOR PROVIDING TECHNICAL SUPPORT TO THE CHIEF OF NAVAL OPERATIONS IN THESE AREAS.

...CURRENT IMPORTANT PROGRAMS

MANPOWER MANAGEMENT  
EDUCATION AND TRAINING  
PERSONNEL ADMINISTRATION  
ORGANIZATIONAL MANAGEMENT  
HUMAN PERFORMANCE

...FUNCTIONS/EQUIPMENT/CAPABILITIES

IBM 4841 COMPUTER SYSTEM WITH COMMUNICATIONS CAPABILITY TO OTHER COMPUTERS, VAX 11/780 WITH ARPANET ACCESS WHICH SUPPORTS THE NAVY LABORATORY COMPUTER NETWORK, PDP 11/45, BIOTECHNOLOGY DATA ACQUISITION SYSTEMS, VARIOUS CRT AND PRINTING DEVICES INTERFACING WITH THE NAVAL OCEAN SYSTEMS CENTER UNIVAC 1100/2 COMPUTER.

INSTALLATION: RESEARCH LABORATORY

WASHINGTON, D.C.

C.O. CAPT. J.A. MCMORRIS II DIR. OF RSCH. DR. T. COFFEY

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	302.650	324.700
TOTAL PROCUREMENT	7.916	8.204
TOTAL O&M	9.333	8.145
TOTAL OTHER	21.150	18.404
TOTAL ANNUAL LAB	341.049	359.453
TOTAL INHOUSE	185.474	182.323
TOTAL INHOUSE RDT&E	163.130	163.030
ANNUAL OPERATING COST	72.900	81.632

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	137	2	40	97
CIVILIAN	3090	664	1505	1585
TOTAL	3227	666	1545	1682

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1072	2348.281	192.677	481.382	3022.340	98.500	118.917

...MISSION

TO CONDUCT A BROADLY BASED MULTIDISCIPLINARY PROGRAM OF SCIENTIFIC RESEARCH AND ADVANCED TECHNOLOGICAL DEVELOPMENT DIRECTED TOWARD NEW AND IMPROVED MATERIALS, EQUIPMENT, TECHNIQUES, SYSTEMS, AND RELATED OPERATIONAL PROCEDURES FOR THE NAVY.

...CURRENT IMPORTANT PROGRAMS

DIRECTED ENERGY DEVICES  
ADVANCED ECM AND DECOYS FOR NAVY EW SYSTEMS  
ADVANCED ACOUSTIC AND NON-ACOUSTIC SUBMARINE DETECTION PROGRAMS  
SATELLITE PROGRAMS  
ADVANCED HIGH PERFORMANCE MATERIALS.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

PRINCIPAL RESEARCH AND DEVELOPMENT LABORATORY OF THE NAVY. PRIMARY AREAS ARE MATERIALS SCIENCE AND TECHNOLOGY, SPACE SCIENCE AND TECHNOLOGY, RADAR, ELECTRONIC WARFARE, LASER TECHNOLOGY, OPTICS, OPTICAL WARFARE, ELECTRONIC DEVICES, PLASMA AND RADIATION PHYSICS, INTELLIGENCE SUPPORT, UNDERSEA SURVEILLANCE. MAJOR FACILITIES INCLUDE ACOUSTIC STANDARD AND CALIBRATION FACILITIES, HIGH LEVEL RADIATION LABORATORY, ENCLOSED 11,500 CU FT FIRE TEST FACILITY, DIVERSE HIGH ENERGY LASERS, 200 KILOGAUSS HIGH FIELD MAGNET FACILITY, SPACE SIMULATION FACILITIES, AND ELECTRONIC WARFARE CENTRAL TARGET SIMULATOR.

INSTALLATION: SUBMARINE MEDICAL RESEARCH LABORATORY

GROTON, CT.

C.O. CAPT. W. C. MILROY

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	1.995	2.228
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.040	0.010
TOTAL OTHER	0.959	0.913
TOTAL ANNUAL LAB	2.994	3.151
TOTAL INHOUSE	2.994	3.151
TOTAL INHOUSE RDT&E	1.995	2.228
ANNUAL OPERATING COST	0.732	1.086

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	36	8	14	22
CIVILIAN	55	10	24	31
TOTAL	91	18	38	53

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1	40.514	14.099	0.000	54.613	1.315	1.889

...MISSION

TO CONDUCT MEDICAL RESEARCH AND DEVELOPMENT AS IT RELATES TO SUBMARINE, SHIPBOARD, DIVING AND AMPHIBIOUS ENVIRONMENTS.

...CURRENT IMPORTANT PROGRAMS

COMPUTER ASSISTED DIAGNOSIS PROGRAMS FOR CORPSMEN ABOARD NUCLEAR SUBS  
AUDITORY AND VISUAL T AND B OF SUBMARINES AND DIVERS PHYSIOLOGICAL PSY-  
CHOLOGICAL RESEARCH IN COLD WEATHER. HUMAN FACTORS VISION AUDITORY RSCH  
IN ADVANCED SONAR SYSTEMS AND HUMAN FACTORS SUB INFO PROCESSING. HEALTH  
AND LONGEVITY OF NUCLEAR SUBMARINE CREWS. NUCLEAR SUB ATMOSPHERE EVAL.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

BASIC AND APPLIED RESEARCH COMPETENCE IN CARDIOPULMONARY, THERMAL, AND  
HYPERBARIC PHYSIOLOGY, BIOCHEMISTRY, AUDITION, VISION, HUMAN FACTORS  
ENG, HYPERBARIC AND MECHANICAL SERVICES, ELECTRICAL INSTRUMENTATION AND  
REPAIRS, COMPUTER APPLICATIONS, ANIMAL SCIENCES, TECHNICAL LIBRARY, GRAPHIC  
ARTS, PHOTOGRAPHY, MODEL MAKING, HYPERBARIC CHAMBER, HUMAN 150 PSI ANIMAL  
300 PSI AND 1000 PSI, SURGICAL SUITE, COMPUTER APPLICATIONS FACILITY,  
CLOSED CIRCUITRY SYSTEM, GAS CHROMATOGRAPHS, EEG, DOPPLER SYSTEM, SONAR  
STACK SIMULATION TEST SYSTEM, FLUIDIC CONTROL CONSOLE, RESPIRATORY MASS  
SPECTROMETER.

INSTALLATION: SURFACE WEAPONS CENTER

SILVER SPRING, MD.

C.O. CAPT. J. R. WILLIAMS

TECH. DIR. DR. L. L. HILL

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	279.827	279.123
TOTAL PROCUREMENT	114.258	70.905
TOTAL O&M	64.485	56.476
TOTAL OTHER	49.354	34.354
TOTAL ANNUAL LAB	507.924	440.858
TOTAL INHOUSE	216.508	264.698
TOTAL INHOUSE RDT&E	127.319	141.706
ANNUAL OPERATING COST	104.668	124.289

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	103	0	35	68
CIVILIAN	5089	241	2307	2782
TOTAL	5192	241	2342	2850

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
5347	1656.078	180.751	1306.003	3142.832	105.975	150.289

...MISSION

THE PRINCIPAL NAVY RESEARCH, DEVELOPMENT, TEST AND EVALUATION CENTER FOR SURFACE SHIP WEAPONS SYSTEMS, ORDNANCE, MINES AND STRATEGIC SYSTEMS SUPPORT

...CURRENT IMPORTANT PROGRAMS

STRATEGIC SYSTEMS-TRIDENT, POSEIDON, MK500, MISSILE MATERIELS, TARGETING. COMBAT-SYSTEMS-AEGIS, DDG-51, CV/CVN, CGN-38, DDG-993, DD-963, WEAPON SYSTEMS-TOMAHAWK, SM-2, GUIDED PROJECTILE, HI POWER RADIATION. UNDERWATER SYSTEMS-CAPTOR, QUICKSTRIKE, MINES, MK-48(ADCAP), WARHEADS. ELECTRONIC SYSTEMS-SLQ-32, SLQ-17, AN/SPY-1, NUCLEAR WPNS EFFECTS.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

FACILITIES INCLUDE WIND TUNNELS UP TO MACH 18, 1.75 MILLION GAL. HYDROBALLISTIC TANK, MAGNETIC SILENCING FACILITY, PBM DISKPAC PRODUCTION FACILITY, FACILITIES FOR ASSURANCE OF COMPUTER PROGRAMS FOR STRATEGIC AND TACTICAL MISSILES, INTELLIGENCE PROCESSING SYS, GUN AND MISSILE RANGE INCLUDING LAND-BASED DEVELOPMENT SITES FOR WEAPON CONTROL SYSTEMS. ELECTROMAGNETIC EFFECTS FACILITIES FOR NUCLEAR AND NON-NUCLEAR EFFECTS. FACILITIES FOR WARHEAD CHARACTERIZATION AND DAMAGE TO TARGETS, DEV AND TEST FACILITIES FOR LASER AND ELECTRO-OPTICS SUBSYSTEMS, DEEP WATER OFFSHORE FACILITIES FOR MINE SYS, MOBILE TACTICAL WAR GAMES FACILITY, EXPLOSIVES DEV FACILITIES, EXTENSIVE SCIENTIFIC COMPUTER FACILITY, FUZES, EXPLOSIVES, MATERIALS AND MARINE CORPS SUPPORT FACILITIES.

INSTALLATION: UNDERSEA RANGES DEPARTMENT

NEWPORT, RI.

C.O. CAPT. J. W. AILES, IV TECH. DIR. MR. EARL MESSERE

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	37.259	36.814
TOTAL PROCUREMENT	0.742	0.637
TOTAL O&M	10.950	11.890
TOTAL OTHER	1.603	1.115
TOTAL ANNUAL LAB	50.554	49.956
TOTAL INHOUSE	9.928	7.619
TOTAL INHOUSE RDT&E	8.829	6.437
ANNUAL OPERATING COST	0.000	0.000

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	41	0	9	32
CIVILIAN	22	2	13	9
TOTAL	63	2	22	41

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1042	82.178	12.464	331.127	425.769	26.938	1.507

...MISSION

TO PROVIDE DEEP WATER DEV AND OPRNL T&E FACLTYS FOR U/W ACOUSTIC MEASUREMENTS, TESTING, AND CALBRN SONARS. PROVIDE ACCURATE U/W, SURFCE AND IN-AIR TRCKNG DATA ON SHIPS, SUBS, AIRCFT AND WEAPON SYSTEMS.

...CURRENT IMPORTANT PROGRAMS

MK48 WEAPON SYSTEMS TRAINING CERTIFICATION PROGRAM  
SHIP SILENCING PROGRAM  
FLEET TRAINING/SUBROC, RANGEX, SHAREM  
TORPEX/RANGEX  
R&D TESTS/CAPTOR/MP SONAR/TOWED ARRAYS/LAMPS/BQQ 5/DICASS

...FUNCTIONS/EQUIPMENT/CAPABILITIES

HIGHLY ADVNCD AND INSTRMNTD ASW WEAPONS, SONAR, AND FORACS TEST MEASURMNT RANGES IN SUPPORT OF NAVY ASW AND UNDERSEA R&D PROGRAMS, AND ASW FLEET ASSESSMENT AND OPERATIONAL READINESS.

INSTALLATION: UNDERWATER SYSTEMS CENTER

NEWPORT, RI.

C.O. CAPT. J. W. AILES, IV

TECH. DIR. MR. EARL MESSERE

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	174.225	216.466
TOTAL PROCUREMENT	84.902	90.252
TOTAL O&M	115.644	131.579
TOTAL OTHER	11.083	24.605
TOTAL ANNUAL LAB	385.854	463.002
TOTAL INHOUSE	164.772	207.118
TOTAL INHOUSE RDT&E	94.004	121.022
ANNUAL OPERATING COST	59.004	73.405

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	79	0	30	49
CIVILIAN	2892	86	1640	1252
TOTAL	2971	86	1670	1301

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
381	1077.751	260.348	498.049	1836.148	54.651	65.500

...MISSION

TO BE THE PRINCIPAL NAVY RDT&E CTR FOR SUBMARINE WARFARE AND SUBMARINE WEAPON SYSTEMS.

...CURRENT IMPORTANT PROGRAMS

ADVNC'D TECHNGY IN U/W ACOUSTCS, INFO PROCSNG, WEAPONRY.  
 DESGN, DEV & EVAL U/W COMBAT SUB SYSMS INCNG SUBACS & SURF SHIP SONAR.  
 RDT&E FOR OVERALL U/W COMBAT (TRIDENT, 688, ETC.).  
 INTRODUCE TO FLT AND IN-SERV ENGINEERING OF MK48 & DEV OF MK48 ADCAP.  
 DESGN, DEV&EVAL OF LAUNCHERS, U/W TARGET SYS & MOBILE/FIXD U/W TEST RANGES

...FUNCTIONS/EQUIPMENT/CAPABILITIES

PRIMARY IN-HSE R&D CAPABILITY FOR NAVY U/W COMBAT SYSTEMS, SUBSYSTEMS AND  
 TECHNLGYS FOR SONAR SYSTEMS (HULL-TOWD/SUB COMCTNS SYSTEMS INTEGRTN/SUB  
 ANTNA SYSTEMS). U/W WPN RANGE TECHNLGY/REDINESS OF IN-SVC SHIPBOARD U/W  
 SYSTEMS/ASW SUP. TORPEDO TEST RANGES (FIXD/PORTBLE) SHLOW AND DP WTR ASW  
 WPN FIRE CTRL R&D FACILITY. ASW WPN LAUNCHING DEVICE R&D FACILITY, QLT  
 ENG. EVAL&RELIABILITY LAB, BERMUDA RSCH FACLT, TORPEDO PROPULSN TEST  
 FACLT, ELECTMCNTC FACLT, SYS CRTFCTN AND INTGRTN FACLT, ACOUSTC MSMNT &  
 XDUCER R&E FACLT, TORPDO TEST RANGE. INSTMNT SHETER, ACOUSTC RANGE AUTE.



INSTALLATION: WEAPONS CENTER

CHINA LAKE, CA.

C.O. CAPT. K. A. DICKERSON

TECH. DIR. DR. B. W. HAYS

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	245.908	276.539
TOTAL PROCUREMENT	127.588	127.697
TOTAL O&M	33.838	33.513
TOTAL OTHER	52.890	76.153
TOTAL ANNUAL LAB	459.324	513.902
TOTAL INHOUSE	276.079	318.487
TOTAL INHOUSE RDT&E	173.281	204.044
ANNUAL OPERATING COST	65.758	85.876

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	570	0	38	532
CIVILIAN	4152	131	1602	2550
TOTAL	4722	131	1640	3082

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1127117	1746.309	263.692	4192.824	6202.825	233.143	114.368

...MISSION

THE PRINCIPAL NAVY RDT&E CENTER FOR AIR WARFARE SYSTEMS (EXCEPT ANTI-SUBMARINE WARFARE SYSTEMS) AND MISSILE WEAPON SYSTEMS, AND THE NATIONAL RANGE/FACILITY FOR PARACHUTE TEST AND EVALUATION.

...CURRENT IMPORTANT PROGRAMS

ANTI-AIR MSL AIM-9LM SIDEWINDER, AIM/RIM-7F/M SPARROW, ACIMD TECH DEMO ANTI-SURFACE WPNS A/RGM-84 HARPOON, CRUISE MISSILES, AND MSL COMPONENTS. ELECTRONIC W/F AGM-88 HARM, ALR-67, SIMULATION, EQUIPTS AND TACT EVALS TAC A/C SYS INTEGRATION A-7E, A-6E, AV-8B, FA-18, AIRCREW EQUIPMTS T AND E AIR/SURFACE-LAUNCHED WPNS, TACTICS, A/C WPN SYS, SUB/SYSTEMS.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

CONDUCT IN-HOUSE RESEARCH AND ESTABLISH AND MAINTAIN PRIMARY IN-HOUSE DEVELOPMENT, TEST, EVALUATION, AND IN-SERVICE ENGINEERING SUPPORT FOR SPECIFIC NAVY, MARINE CORPS AND JOINT SERVICE PRODUCTS SUCH AS ANTI-AIR MISSILES, ANTI-SURFACE WEAPONS, DEFENSE PENETRATION SYSTEMS, INTEGRATED TACTICAL AIRCRAFT SYSTEMS. FACILITIES INCLUDE MICHELSON LAB, ELECTRONIC WARFARE THREAT ENVIRONMENT SIMULATION, SOLID STATE DEVICE LAB, ENCOUNTER SIMULATION LAB, PROPULSION RESEARCH LAB, MICROELECTRONICS FACILITY, EXPLOSIVES R&D FACILITIES, GROUND AND AIRCRAFT RANGES, EXTERIOR AND TERMINAL BALLISTICS RANGES, ARMITAGE AIR FIELD, PARACHUTE TEST TOWERS, SUPERSONIC TEST TRACKS, MICROWAVE ANECHOIC FACILITIES, RADIO-FREQUENCY AND INFRARED/ELECTRO-OPTICAL HARDWARE-IN-THE-LOOP SIMULATIONS, AND LASER/ELECTRO-OPTICS LABS.

INSTALLATION: WEAPONS EVALUATION FACILITY

ALBUQUERQUE, N.M.

C.O. CAPT. R. C. KAUP

TECH. DIR MR. S. R. RANDALL

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	5.134	4.973
TOTAL PROCUREMENT	1.329	1.912
TOTAL O&M	2.618	2.722
TOTAL OTHER	4.684	4.874
TOTAL ANNUAL LAB	13.765	14.481
TOTAL INHOUSE	11.945	12.460
TOTAL INHOUSE RDT&E	3.982	3.775
ANNUAL OPERATING COST	1.673	1.888

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	127	0	24	103
CIVILIAN	105	1	55	50
TOTAL	232	1	79	153

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
7	23.000	34.000	95.000	152.000	9.600	1.461

...MISSION

CONDUCT THE NAVY NUCLEAR WEAPON SAFETY PROGRAM. ASSIST IN BOARD OF INSPECTION AND SURVEY AIRCRAFT TRIALS. F/A-18A BIS PLANS. ASW STAND OFF WEAPON PHASE 1 AND 2.

...CURRENT IMPORTANT PROGRAMS

SAFETY STUDIES. AIRCRAFT BLAST SURVIVABILITY TEST AT WSMR. F/A-18A EMP TEST SUPPORT. A-6 TAC MANUAL UPDATE. INRAD COMPARISON STUDY. CHECK LIST UPDATE. FLIGHT TEST PROGRAM. FOREIGN AIRCRAFT PROJECTS. HIGH ENERGY LASER PROJECTS. AIRCRAFT NUC WEAPON CERTIFICATION-COMPATIBILITY. CG. CT TEST AND EVALUATION PROJECTS ON NUCLEAR AND SELECTED NONNUCLEAR WEAPONS.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

4 A-7 AND 1 F/A-18 AIRCRAFT. FIFTEEN ORDNANCE STORAGE LOCKERS. A SECURE STORAGE VAULT. WEAPON LOADING CAPABILITY FOR A WIDE VARIETY OF ORDNANCE. HOT-COLD CHAMBER FOR ORDNANCE TEST. TELEMETRY AND ON-BOARD-AIRCRAFT PHOTO AND TAPE RECORDING EQUIPMENT. PERKIN-ELMER 7/32 COMPUTER. WANG MVP COMPUTER. AS A KIRTLAND AIR FORCE BASE TENANT ACCESS TO THE CRAY-2, CYBER 176, AND CDC 6600 COMPUTERS, ALECS, ARES, TRESTLE, AND OTHER EMP FACILITIES. GENERAL SEVERE ENVIRONMENT FACILITIES. HIGH ENERGY LASER LAB INCLUDING THE AIRBORNE LASER LAB. SHOCK-BLAST FACILITY. NEARBY ARE THE FOLLOWING. WHITE SANDS MISSILE RANGE, SANDIA LBS, LOS ALAMOS NATIONAL LAB, ALL WITH AVAILABIE EXTENSIVE TEST FACILITIES. AT NWEF THE FOLLOWING CAPABILITIES- NUCLEAR WEAPON SAFETY AND BIS. WEAPON CHECK LIST DEVELOPMENT. NUCLEAR ENVIRONMENTS ON AIRCRAFT AND WEAPONS, FLIGHT TESTS.

INSTALLATION: AERO PROPULSION LABORATORY

WPAFB, OH.

DIR COL. JAMES D. JOHNSON

CH. SCI DR. EDWARD T. CURRAN

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	117.755	126.837
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	1.368	1.441
TOTAL ANNUAL LAB	119.123	128.278
TOTAL INHOUSE	7.910	8.571
TOTAL INHOUSE RDT&E	6.542	7.130
ANNUAL OPERATING COST	7.342	7.620

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	45	3	39	6
CIVILIAN	339	27	218	121
TOTAL	384	30	257	127

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
44	266.165	47.779	123.889	437.833	79.080	34.760

...MISSION

PLAN AND EXECUTE RESEARCH, EXPLORATORY AND ADVANCED DEVELOPMENT PROGRAMS IN AIRBREATHING PROPULSION, AEROSPACE POWER, FUELS AND LUBRICATION, AND AIRCRAFT FIRE PROTECTION TECHNOLOGY. CONDUCT CONTRACT AND IN-HOUSE PROGRAMS, PROVIDE OPERATIONAL AND SYSTEM SUPPORT.

...CURRENT IMPORTANT PROGRAMS

ADVANCED TURBINE ENGINE GAS GENERATOR TECHNOLOGY  
JOINT ADVANCED FIGHTER ENGINE (JFE) TECHNOLOGY  
RAMJET TECHNOLOGY FOR TACTICAL AND STRATEGIC MISSILES  
POWER TECHNOLOGY FOR MILITARY SPACECRAFT  
OPTIMIZATION OF AVAILABILITY AND COST OF AVIATION TURBINE FUELS.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

TURBINE ENGINE CONTROLS TEST FAC, BATTERY DEVELOPMENT AND TEST FAC, FIRE RESEARCH LAB, COKER LAB, FUEL ANALYSIS LAB, COMBUSTION FAC, ROTOR TEST FAC, 6 SEA-LEVEL ENGINE TEST STANDS-1 CAPABLE OF 60,000 LBS THRUST, 1 TURBINE ENGINE ALTITUDE CELL, 2 PROPELLER WHIRL RIGS-1 CAPABLE OF 10000 HP, DIRECT CONNECT RAMJET TEST FAC, RAMJET COMPONENTS LAB, LUBE TEST RIGS, SEAL TEST RIGS, BEARING TEST RIGS, FUEL HANDLING FAC, FIRE TEST SHELTER, SHAKER TABLE, HIGH TEMPERATURE TURBINE COMPONENT TEST FAC, AIRCRAFT ELECTRICAL POWER FAC WITH THREE 350 HP DRIVES, SUPERCONDUCTIVITY LAB, HIGH POWER LAB TO 5 MW, THERMAL ENERGY STORAGE LAB, HYDRAULICS LAB, PLASMA PHYSICS LAB, LASER HOLOGRAPHY LAB, COMPRESSOR TEST FACILITIES, SOLAR CELL LAB, HIGH SPEED DRIVE STAND, NACELLE SIMULATOR.

INSTALLATION: AEROSPACE MEDICAL RESEARCH LABORATORY

WPAFB, OH.

CDR. COL. GEORGE C. MOHR

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	30.557	26.350
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.380
TOTAL OTHER	1.603	1.287
TOTAL ANNUAL LAB	32.160	28.017
TOTAL INHOUSE	18.556	15.011
TOTAL INHOUSE RDT&E	16.953	14.418
ANNUAL OPERATING COST	0.844	0.898

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	137	27	65	72
CIVILIAN	152	27	103	49
TOTAL	289	54	168	121

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
30	1.257	105.887	105.887	213.031	11.062	27.047

...MISSION

ACCOMPLISH BEHAVIORIAL AND BIOMEDICAL RESEARCH AND DEVELOPMENT TO DEFINE HUMAN TOLERANCE AND DEGRADATION OF HUMAN PERFORMANCE UNDER THE CONDITION OF ENVIRONMENTAL STRESS ASSOCIATED WITH AEROSPACE OPERATIONS AND PROVIDE SUPPORT TO SYSTEM DEVELOPMENT IN THE ABOVE AREAS.

...CURRENT IMPORTANT PROGRAMS

OPERATOR COMMAND CONTROL AND COMMUNICATIONS TECHNOLOGY. CREW SYSTEMS AUTOMATION TECHNOLOGY. ADVANCED ESCAPE TECHNOLOGY. HUMAN COUNTERMEASURES TECHNOLOGY. ENVIRONMENTAL HEALTH PROTECTION TECHNOLOGY. MAN-IN-SPACE ALTERNATIVES TECHNOLOGY. CHEMICAL DEFENSE TECHNOLOGY.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

HUMAN DECELERATION SYSTEM TO SIMULATE THE COMPLEX ACCELERATION ENVIRON ASSOCIATED WITH EJECTION AND CRASH LANDING. DYNAMIC ENVIRONMENT SIMULATOR A SIX DEGREE OF FREEDOM MAN-RATED CENTRIFUGE USED TO SIMULATE SUSTAINED ACCELERATIONS SUCH AS THOSE ENCOUNTERED IN AIR COMBAT MANEUVERING. THOMAS DOMES-EIGHT ALTITUDE EXPOSURE CHAMBERS TO SIMULATE EXOTIC ARTIFICIAL ATMOSPHERIC CONDITIONS. STRATEGIC AND TACTICAL COCKPIT SIMULATION FACILITIES USED TO PERFORM REAL-TIME MAN-IN-THE-LOOP EXPERIMENTS. ANECHOIC AND REVERBERATION CHAMBERS TO ENABLE EXPERIMENTAL INVESTIGATIONS OF POTENTIALLY HAZARDOUS NOISE TO DETERMINE EFFECTS ON BODY FUNCTION & PERFORMANCE. VIVARIUM-LABORATORY RESEARCH ANIMAL FACILITY.

INSTALLATION: ARMAMENT DIVISION

EGLIN AFB, FL.

CDR. MAJ. GEN. W. T. TWINTING

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	539.266	555.359
TOTAL PROCUREMENT	495.213	892.559
TOTAL O&M	14.409	13.061
TOTAL OTHER	134.149	121.028
TOTAL ANNUAL LAB	1,183.037	1,582.007
TOTAL INHOUSE	298.460	334.818
TOTAL INHOUSE RDT&E	167.445	205.573
ANNUAL OPERATING COST	38.004	89.461

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	4880	2	514	4366
CIVILIAN	2081	24	942	1139
TOTAL	6961	26	1456	5505

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
463796	324.756	953.693	10123.933	11402.382	342.174	293.690

...MISSION

RESP. FOR AIR LAUNCH TACTICAL & AIR DEF MSLS; NONNUC MUN, GUIDED WEAP, THREAT SIMULATORS, AIRBASE DEF, & RELATED EQUIPMT. RESP. FOR BASIC TECHNOLOGY, DEVELOPMENT, TEST, INITIAL ACQ & DEPLOY. TEST MISSION IS LEAD CTR IN MUNITIONS, EC, INTRUSION, INTERDICTION, & CLIMACTIC SIMULATION.

...CURRENT IMPORTANT PROGRAMS

WIDE AREA ANTI-ARMOR MUNITIONS  
PRECISION GUIDANCE MUNITIONS  
ADVANCED MEDIUM RANGE AIR-TO-AIR MISSILE  
RANGE SYSTEMS  
RUNWAY CRATERING SUBMUNITIONS.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

SCIENTIFIC/ENGINEERING PERSONNEL AND LABORATORY FACILITIES CAPABLE OF EXPLOR, ADV, AND ENGINEERING DEVELOPMENT OF NONNUCLEAR MUNITIONS AND EQUIPMENT. ARMAMENT SYSTEMS TEST ENVIRONMENT COVERING 725 SQ MILES WITH LARGE ADJACENT WATER AREA; HAS 28 TEST AREAS WITH INSTRUMENTED FACILITIES INCLUDING PRECISION TRACKING RADARS & PHOTO-OPTICS; IS USED FOR MUNITIONS TESTING & ELECTROMAGNETIC TEST ENVIRONMENT; AN INSTRUMENTED COMPLEX OF THREAT SYSTEMS FOR EVAL WPN SYS EFFECTIVENESS; PROVIDES A REALISTIC ENVIRONMENT FOR TESTING A WPN SYS AGAINST AN ACTIVE DEFENSE SYSTEM; A CLIMATIC LAB CAPABLE OF TESTING COMPLETE WEAPON SYSTEMS, A COMPUTER SCIENCE LAB, A PHYSICAL SCIENCE LAB, A PHOTO LAB, AN INSTRUMENTATION R/D FACILITY, AND A MISSILE SIMULATION AND TEST LABORATORY.

INSTALLATION: ARMAMENT LABORATORY

EGLIN AFB FL

CDR. MAJ. GEN. W. T. TWINTING

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	65.571	71.312
TOTAL PROCUREMENT	1.250	1.115
TOTAL O&M	1.301	0.748
TOTAL OTHER	3.117	3.120
TOTAL ANNUAL LAB	74.239	76.295
TOTAL INHOUSE	30.624	30.899
TOTAL INHOUSE RDT&E	29.338	29.954
ANNUAL OPERATING COST	0.000	0.000

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	165	4	153	12
CIVILIAN	348	15	246	102
TOTAL	513	19	399	114

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
0	0.000	0.000	0.000	0.000	0.000	0.000

...MISSION

AFATL IS SPECIFICALLY RESPONSIBLE FOR THE PLANNING, FORMULATION AND EXECUTION OF RESEARCH FOR EXPLORATORY AND ADVANCED DEVELOPMENT OF NON-NUCLEAR ARMAMENT AND RELATED EQUIPMENT, AS WELL AS TECHNICAL SUPPORT FOR ARMAMENT SYSTEMS.

...CURRENT IMPORTANT PROGRAMS

AFX - 400 EXPLOSIVES  
IMPROVED 2000 POUND WARHEAD  
INFRARED HIGH VALUE TARGET ACQUISITION  
WEAPONS AIRFRAME TECHNOLOGY  
HYPERVELOCITY MISSILE.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

MAJOR EQUIPMENT INVENTORY CONSISTS OF A VARIETY OF ANALYZERS, SIMULATORS MIXER EQUIPMENT, AND MEASUREMENT MACHINES, SOME WITH RF, X-RAY AND LASER CHARACTERISTICS. AFATL FACILITIES INCLUDE 18 SEPARATE LABORATORIES FOR THE CONDUCT OF A WIDE RANGE OF SCIENTIFIC INVESTIGATIONS AND ANALYSES; A RAPID RESPONSE MODEL FABRICATION SHOP; AND A TECHNICAL LIBRARY WHICH HAS ON-LINE ACCESS TO SEVERAL DATA BANKS.

SPACE AND PROPERTY DATA AND ANNUAL OPERATING EXPENSES ARE INCORPORATED IN ARMAMENT DIVISION.

INSTALLATION: ARNOLD ENGINEERING DEVELOPMENT CENTER

TULLAHOMA, TN.

CDR. COL. PHILIP J. CONRAN ACT. CH. SCI. DR. JAMES G MITCHELL

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	221.088	241.469
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.021	0.024
TOTAL OTHER	34.262	5.400
TOTAL ANNUAL LAB	255.371	246.893
TOTAL INHOUSE	60.928	59.248
TOTAL INHOUSE RDT&E	56.145	54.324
ANNUAL OPERATING COST	33.547	36.889

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	167	4	80	87
CIVILIAN	221	5	37	184
TOTAL	388	9	117	271

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
39081	1141.415	207.183	1715.051	3063.649	896.000	86.551

...MISSION

PRIMARY MISSION IS TO PROVIDE ENVIRONMENTAL TEST SUPPORT TO SYSTEMS DEVELOPMENT AND RESEARCH DEVELOPMENT PROGRAMS OF DOD AND TO KEEP EXISTING FACILITIES MODERN TO PROVIDE ADVANCED FACILITIES AS REQUIRED. AND TO CONTINUALLY DEVELOP ADVANCED TEST TECHNIQUES AND INSTRUMENTATION.

...CURRENT IMPORTANT PROGRAMS

PEACEKEEPER TESTING INCLUDES AERODYNAMIC AND ROCKET MOTOR FIRINGS  
ANTI SATELLITE TEST SUPPORT INCLUDES SENSOR + LAUNCH VEHICLE PROPULSION  
F100 COMPONENT IMPROVEMENT PROG AND ENGINE MODEL DERIVATIVE PROG TEST  
B-1B F101 ENGINE AND AERODYNAMIC TEST  
SPACE TRANSPORTATION SYSTEM AERODYNAMICS AND THERMAL PROTECTION TESTING

...FUNCTIONS/EQUIPMENT/CAPABILITIES

AEDC IS COMPRISED OF ABOUT 85 TEST UNITS. INCLUDED ARE WIND TUNNELS WITH TEST SECTIONS TO 16 FT SQ AND SPEED FROM SUBSONIC TO MACH 20; TURBINE ENGINE TEST CELLS WHICH PROVIDE SIMULATION TO MACH 3; ROCKET TEST CELLS, THE LARGEST RATED AT .5 MILLION LBS THRUST AT ALTITUDE; SPACE SIMULATION CHAMBERS TO 42 FT DIA AND 82 FT HIGH; HYPERBALLISTIC RANGES; DUST & SNOW EROSION FACILITY; BIRD IMPACT FACILITY; TWO CAPTIVE TRAJECTORY SYSTEMS. THESE FACILITIES HAVE SUPPORTED DEVELOPMENT AND QUALIFICATION OF MOST MAJOR AERONAUTICAL, MISSILE, AND SPACE SYSTEM DEVELOPMENT SINCE 1954. THIS TESTING COMPLEMENTS EXPENSIVE AND OFTEN HAZARDOUS FLIGHT TESTING AND ASSURES THAT SYSTEM DEFICIENCIES ARE FOUND EARLY, SAVING TIME AND RESOURCES IN THE OVERALL DEVELOPMENT, ACQUISITION AND DEPLOYMENT PROCESS.

INSTALLATION: AVIONICS LABORATORY

WPAFB, OH.

CDR.. COL. BARTON KRAWETZ

CH. SCI. DR. JESSE C. RYLES

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	242.941	344.871
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.150	0.000
TOTAL OTHER	4.841	5.035
TOTAL ANNUAL LAB	247.932	349.906
TOTAL INHOUSE	23.540	24.085
TOTAL INHOUSE RDT&E	18.699	19.050
ANNUAL OPERATING COST	8.191	9.200

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	154	5	120	34
CIVILIAN	603	37	404	199
TOTAL	757	42	524	233

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
220	229.369	9.483	405.264	644.116	45.602	99.989

...MISSION

MAINTAINS AN AVIONICS TECH BASE THROUGH RESEARCH, EXPLORATORY AND ADV DEV AND ASSIGNED BASIC RESEARCH PROGRAMS. DEV AND DEMO COST-EFFECTIVE AVIONICS TO REDUCE ACQUISITION AND OPERATING COSTS AND IMPROVE OPERATIONAL CAPABILITIES, SUPPORTS OPERATIONAL COMMANDS AND PRODUCT DIVISIONS.

...CURRENT IMPORTANT PROGRAMS

VERY HIGH SPEED INTEGRATED CIRCUITS TECHNOLOGY  
SYNTHETIC APERTURE/BISTATIC RADAR  
GALLIUM ARSENIDE POWER SOURCES FOR MICROWAVE APPLICATIONS  
MONOPULSE RADAR COUNTERMEASURES  
AUTOMATIC TARGET CLASSIFICATION.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

TECHNICAL AREAS OF RESPONSIBILITY INCLUDE - FIRE CONTROL, WEAPON DELIVERY, COMMUNICATIONS, ELECTRONIC WARFARE, NAVIGATION, SURVEILLANCE, RECONNAISSANCE, INFORMATION PROCESSING AND CONTROL, SUBSYSTEMS, INTEGRATION AND SYSTEMS ARCHITECTURE, SUPPORTING ELECTRONIC DEVICES. IN-HOUSE FACILITIES INCLUDE - SIMULATION AND ANALYSIS OF INTEGRATED DIGITAL SYSTEMS, DESIGN AND FABRICATION OF SPECIALIZED INTEGRATED/HYBRID CIRCUITS AND PRINTED WIRING BOARDS, PERFORMANCE EVALUATION OF E-O SYSTEMS AND CORRELATION WITH WEATHER OBSERVATION, SIMULATION OF REAL-WORLD SIGNAL/JAMMING ENVIRONMENT FOR EVALUATION OF ELECTRONIC WARFARE SYSTEMS, EVALUATION OF RECON SENSORS IN REALISTIC FLIGHT ENVIRONMENT. OTHER LABS ARE MAINTAINED FOR EVALUATION OF AIRBORNE AND SPACE SENSORS AND COMPONENTS FROM OPTICAL TO RADIO FREQUENCIES.



INSTALLATION: EASTERN SPACE & MISSILE CENTER

PATRICK AFB, FL.

CDR. COL. MARVIN L. JONES

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	0.000	0.000
TOTAL PROCUREMENT	9.065	9.437
TOTAL O&M	282.638	276.716
TOTAL OTHER	68.532	51.151
TOTAL ANNUAL LAB	360.235	337.304
TOTAL INHOUSE	72.177	65.247
TOTAL INHOUSE RDT&E	0.000	0.000
ANNUAL OPERATING COST	53.359	69.346

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL FHDS	TOTAL PROF	NON- PROF
MILITARY	2769	7	476	2293
CIVILIAN	1242	0	101	1141
TOTAL	4011	7	577	3434

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
26343	177.723	1213.525	4510.214	5901.462	421.032	326.086

...MISSION

SUPPORT OF AIR GROUND AND SEA LAUNCHED SPACE AND MISSILE SYSTEMS FROM CCAFS AND KSC. OPERATION OF INSTRUMENTED SHIP IN SUPPORT OF REQUIREMENTS SUPPORT OF USAF SPACETRACK. SUPPORT OF SPECIAL PROJECTS, DOCUMENTED R&D TESTS AND VARIOUS TENANT ACTIVITIES.

...CURRENT IMPORTANT PROGRAMS

NAVY PROGRAMS - POSEIDON, TRIDENT, CHEVALINE  
MILITARY SPACE SUPPORT PROGRAMS - TITAN 34D/IUS  
MILITARY MISSION SUPPORT PROGRAMS - SRAM AND PERSHING  
NASA PROGRAMS - DELTA, ATLAS/CENTAUR, AND SPACE SHUTTLE  
DOD SPACE TRANSPORTATION SYSTEM.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

ESMC CAPABILITIES INCLUDE: ASSEMBLY, PRELAUNCH CHECKOUT AND LAUNCH PERFORMANCE EVALUATION OF BALLISTIC MISSILES, SPACE LAUNCH VEHICLES AND PAYLOADS. SERVICES INCLUDE: TRACKING, LONG DISTANCE COMMUNICATIONS, AND DATA REDUCTION AND ANALYSIS. EQUIPMENT AND FACILITIES INCLUDE: CCAFS LAUNCH SUPPORT, MAINLAND AND DOWNRANGE INSTRUMENTATION AND COMMUNICATION INSTRUMENTED SHIP, DATA PROCESSING, PHOTO/ELECTRO-OPTICAL SERVICES MISSILE IMPACT LOCATION SYSTEMS, METEOROLOGICAL SERVICES AND RANGE TIMING SYSTEMS. ESMC OPERATES AND MAINTAINS CCAFS, MAINLAND SITES AND DOWNRANGE STATIONS. SUPPORT FUNCTIONS INCLUDE: CONTRACTOR OPERATION, PLANT ENGINEERING. LABS, SHOPS, AND OTHER SPECIAL SERVICES.

CDR. COL. ROBERT BOYER

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	16.230	12.026
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.399	0.312
TOTAL OTHER	2.257	2.482
TOTAL ANNUAL LAB	18.886	14.820
TOTAL INHOUSE	4.158	3.236
TOTAL INHOUSE RDT&E	1.610	0.444
ANNUAL OPERATING COST	0.169	0.184

PERSONNEL	PERSONNEL DATA (END OF FY 1983)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	82	6	45	37
CIVILIAN	19	2	12	7
TOTAL	101	8	57	44

ACRES	SPACE AND PROPERTY SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
2	12.000	14.000	0.000	26.000	1.960	2.656

...MISSION

AIR FORCE LEAD AGENCY FOR RESEARCH, DEVELOPMENT, TEST, AND EVALUATION IN THE AREAS OF CIVIL ENGINEERING AND ENVIRONMENTAL QUALITY. AF FOCAL POINT FOR ENVIRONMENTAL QUALITY AND LEAD LABORATORY FOR FACILITIES ENERGY.

...CURRENT IMPORTANT PROGRAMS

RAPID RUNWAY REPAIR AND NEW AIRCRAFT OPERATIONAL SURFACES  
ENVIRONMENTAL QUALITY AND ASSESSMENT RESEARCH AND DEVELOPMENT  
SURVIVABILITY/VULNERABILITY OF FACILITIES  
FACILITIES ENERGY AND ALTERNATE ENERGY SOURCES  
FIRE PROTECTION

...FUNCTIONS/EQUIPMENT/CAPABILITIES

ESL HAS ACCESS TO LABORATORIES AND TEST FACILITIES TO PERFORM QUALITATIVE AND QUANTITATIVE MEASUREMENTS ON ENGINEERING MATERIALS, PAVEMENTS, SOIL MECHANICS, AIR QUALITY, WASTE TREATMENT PROCESSES, FIRE EXTINGUISHING AGENTS, AND HARDENED AIRCRAFT SHELTERS. EQUIPMENT INCLUDES FLAME AND ABSORPTION SPECTROPHOTOMETERS, WATER/WASTE STANDARD METHODS TEST EQUIPMENT, ELECTRICAL AEROSOL ANALYZING EQUIPMENT, LASER PARTICLE SIZE MEASUREMENT EQUIPMENT, AND MICROPROCESSOR DEVELOPMENT SYSTEMS. REMOTE TERMINAL ACCESS IS AVAILABLE TO CYBER 171 AND 176 SCIENTIFIC COMPUTERS WITH OFF LINE PLOTTING CAPABILITY. A RUNWAY REPAIR /ALTERNATE LAUNCH SURFACE TEST SITE HAS A 200 X 600 FOOT TYPICAL RUNWAY SECTION

INSTALLATION: FLIGHT DYNAMICS LABORATORY

WPAFB, OH.

ACT. DIR. MR. J. J. MATTICE

CH. SCI DR. G. KEITH RICHEY

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	160.693	169.378
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	4.879	5.080
TOTAL ANNUAL LAB	165.572	174.458
TOTAL INHOUSE	11.762	12.830
TOTAL INHOUSE RDT&E	6.883	7.750
ANNUAL OPERATING COST	10.915	11.200

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	183	2	135	48
CIVILIAN	648	34	432	216
TOTAL	831	36	567	264

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
76	546.654	5.100	168.182	719.936	50.676	42.043

...MISSION

PLAN AND EXECUTE RESEARCH, EXPLORATORY AND ADV DEV PROGRAMS FOR AERO-SPACE FLT VEHICLE STRUCTURES, AERODYNAMICS, FLT CONTROL, DYNAMICS AND EQUIPMENT. LEAD AFSC LAB FOR EXPERIMENTAL FLT VEHICLES. FOCAL POINT FOR NON-NUCLEAR SURVIVABILITY PROGRAMS.

...CURRENT IMPORTANT PROGRAMS

ADVANCED FIGHTER TECHNOLOGY INTEGRATOR  
ADVANCED COMPOSITE AND METALLIC STRUCTURES  
INTEGRATED FLIGHT MANAGEMENT  
BOOST-GLIDE VEHICLE TECHNOLOGY  
SHORT TAKE-OFF/LANDING AND ROUGH FIELD TECHNOLOGY.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

A BATTLE DAMAGED REPAIRED COMPOSITE OUTER WING PANEL SUCCESSFULLY COMPLETED 2000 HRS OF FATIGUE CYCLING IN THE STRUCTURES TEST FACILITY, FULL QUALIFICATION OF THE F-16 REFURBISHED GENERATION 4 AND 5 CARBON BRAKES WAS ACHIEVED IN THE LANDING GEAR DEVELOPMENT FACILITY. INVESTIGATION OF AN ADVANCED BRAKE CONTROL SYSTEM WAS PERFORMED IN THE ENGINEERING FLIGHT SIMULATION FACILITY. HALON 1301 FIRE EXTINGUISHING-DRY BAY EFFECTIVENESS WAS DEMONSTRATED IN THE AIRCRAFT SURVIVABILITY RESEARCH BALLISTIC RANGE. TESTS IN THE MACH 3 FACILITY DEFINED ROUGHNESS EFFECTS ON TURBULENT BOUNDARY LAYER CHARACTERISTICS FOR SUPERSONIC FLOWS AT HIGH REYNOLDS NUMBERS. A SERIES OF LIGHTNING SIMULATION TESTS ON AN OPERATIONAL F-16 WITH EXTERNAL FUEL TANKS INSTALLED WERE PERFORMED IN THE ATMOSPHERIC ELECTRICITY HAZARDS SIMULATION FACILITY.

INSTALLATION: FLIGHT TEST CENTER

EDWARDS AFB, CA.

CDR. MG. P. W. ODGERS

TECH. DIR. MR. A. D. PHILLIPS

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	151.061	197.234
TOTAL PROCUREMENT	0.774	1.483
TOTAL O&M	19.934	23.264
TOTAL OTHER	87.552	92.392
TOTAL ANNUAL LAB	259.321	314.373
TOTAL INHOUSE	195.535	224.254
TOTAL INHOUSE RDT&E	110.132	135.380
ANNUAL OPERATING COST	28.458	25.726

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	3949	2	164	3785
CIVILIAN	2244	15	318	1926
TOTAL	6193	17	482	5711

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
218767	144.407	311.038	7668.947	8124.392	287.980	157.247

...MISSION

TESTS MANNED/UNMANNED AEROSPACE VEH, INCL ALL-WEATHER. FLT EVAL AEROSPACE RSCH VEH AND DEV TEST AERODYNAMIC DECELERATORS. USAF TEST PILOT SCHOOL. SUPPORTS USAF, DOD, GOV, FOREIGN AND CONTRACTOR TEST/EVAL. UTAH TEST AND TRAINING RANGE AND EDWARDS FLIGHT TEST RANGE.

...CURRENT IMPORTANT PROGRAMS

B-1B DT AND E  
GROUND LAUNCHED CRUISE MISSILE (GLCM)  
DERIVATIVE FIGHTER: (A) F-16XL, (B) F-15E  
NIGHT ATTACK: (A) LANTIRN, (B) A-10 SINGLE SEAT NIGHT ATTACK  
TECHNOLOGY: (A) F-15 IFFC, (B) AFTI F-16.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

TECHNICAL CAPABILITIES. FACILITIES AND EQUIP ARE AVAILABLE FOR COMPLETE RANGE OF SERVICES TO CONDUCT DT AND E FLT TESTS OF AERONAUTICAL SYS OVER LONG DISTANCES, TO CONDUCT FLT EVAL AND RECOVER RSCH VEH, AND TO TRAIN TEST PILOTS. FLIGHT TEST MISSION CONTROL COMPLEX, ENGRG FACILITIES, REAL-TIME INSTRUMENTED RANGES, DATA COLLECTION, REDUCTION AND ANALYSIS FAC, PHOTO/TV, ACFT/ENGINE MAINT, TEST EQUIP, ELECTRONIC SHOPS, AND DRY LAKES FOR RECOVERY AND EMERGENCY LANDINGS PROVIDE SUPPORT FOR ALL PROGRAMS. OTHER FACILITIES ARE PRECISION IMPACT, GUNNERY/BOMBING, INFRARED/PHOTO RESOLUTION, RADAR FIDELITY, TACTICAL AND OPTICAL RANGES, ENGR SIMULATOR, MUNITIONS STORAGE AND CHECKOUT, AND CONTRACTOR-ASSIGNED HANGARS, SHOPS, OFFICE SPACE, ETC. INTEGRATED REAL-TIME MISSION CONTROL CENTER.

INSTALLATION: FRANK J SEILER RESEARCH LABORATORY

USAF ACADEMY, CO.

CDR. LT. COL. T. T. SAITO

CH. SCI. LT. COL. K. E. SIEGENTHALER

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	1.167	1.412
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	0.908	0.984
TOTAL ANNUAL LAB	2.075	2.346
TOTAL INHOUSE	2.075	2.346
TOTAL INHOUSE RDT&E	1.167	1.412
ANNUAL OPERATING COST	0.114	0.142

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	23	9	17	6
CIVILIAN	9	1	5	4
TOTAL	32	10	22	10

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
0	190.000	8.000	0.000	193.000	1.820	2.628

...MISSION

CONDUCT RESEARCH IN LASERS, AEROMECHANICS, AND CHEMISTRY. ENCOURAGE AND SUPPORT ACADEMY FACULTY & CADET RESEARCH BY DIRECT PARTICIPATION. SPONSOR FACULTY RESEARCH PROGRAMS. FOCAL POINT FOR USAF ACADEMY RESEARCH PROPOSED TO DL RESEARCH & TECHNOLOGY LABS (AFSC).

...CURRENT IMPORTANT PROGRAMS

BATTERY RESEARCH & ELECTROCHEMISTRY OF MOLTEN SALTS. ENERGETIC MATERIALS RESEARCH, THEORETICAL CALCULATIONS, I LASER RESEARCH, LASER DAMAGE STUDIES, OPTICAL ROTATION SENSORS, OPTICS RESEARCH, PERIODIC CONTROL, NUCLEAR GYROS, IMAGE PROCESSING. UNSTEADY AERODYNAMICS, INTEGRATED AIRBREATHING PROPULSION.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

MOLTEN SALT MELT STRUCTURE, CONDUCTIVITY & ELECTRODE REACTIONS. EXPLOSIVE & PROPELLANT SYNTH. DECOMPOSITION MECHANISMS & DETONATION PHENOMENA. GENERATION, MSMT, SPECTROSCOPY & MO CALC. OF EXCITED STATE SPECIES. FTIR, UV, FTNMR, EPR, X-RAY & MASS SPEC. GAS & LIQUID CHROMATOGRAPH, ELECTRON MICROSCOPE, SPECIAL SPECTROMETERS & CONDUCTIVITY EQUIP. ASSOC. FACILITIES FOR WET CHEMISTRY. ADVANCED ANALYSIS & EVALUATION TECHNIQUES FOR INERTIAL GUIDANCE SENSORS USING 2-AXIS TEST TABLE (GYRO), AUTOMATIC AZIMUTH ALIGNMENT EQUIPMENT & ELECTRONIC CONTROL EQUIP FOR 50 SERIES INERTIAL DEVICES LOCATED IN A CLASS 1000 CLEAN LAB ON 80 TON AIR SUPPORTED STABLE PLATFORM. VAX 11/780 MINICOMPUTER & SOFTWARE TO AUTOMATE GYRO RESEARCH. EXCIMER, DYE LASERS. AERO RESEARCH IN USAFA SUBSONIC & TRISONIC WIND TUNNELS. HOLOGRAPHIC & OTHER OPTICAL FLOW VISUALIZATION INSTRUMENTATION.

INSTALLATION: GEOPHYSICS LABORATORY

HANSCOM AFB, MA.

CDR. COL. GERALD P. D'ARCY

CH. SCI. DR. ALVA T. STAIR JR

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	78.407	82.444
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	3.734	5.748
TOTAL ANNUAL LAB	82.141	88.192
TOTAL INHOUSE	33.087	34.272
TOTAL INHOUSE RDT&E	29.637	31.146
ANNUAL OPERATING COST	5.881	6.175

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	122	3	39	83
CIVILIAN	488	98	304	184
TOTAL	610	101	343	267

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
336	393.389	14.821	25.883	434.093	9.871	35.279

...MISSION

CONDUCTS AND SUPPORTS AF RELEVANT RESEARCH AND EXPLORATORY DEVELOPMENT IN ENVIRONMENTAL AND PHYSICAL SCIENCES WITH MAJOR EMPHASIS ON GEOPHYSICS. ALSO CONDUCTS AND SUPPORTS SPECIFICALLY ASSIGNED ADVANCED DEVELOPMENT EFFORTS.

...CURRENT IMPORTANT PROGRAMS

SPACE ENVIRONMENT  
WEATHER FORECAST AND OBSERVING AUTOMATION  
IONOSPHERIC SPECIFICATION FOR C3I SYSTEMS  
OPTICAL, INFRARED AND UV BACKGROUNDS FOR SURVEILLANCE SYSTEMS  
GEODETIC AND EARTH MOTION EFFECTS ON MISSILE CEP.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

CONDUCTS RESEARCH AND TECHNICAL DEVELOPMENT IN TERRESTRIAL SCIENCES, ATMOSPHERIC SCIENCES, AND IONOSPHERIC, OPTICAL, SPACE AND SOLAR PHYSICS RELATING TO AIR FORCE NEEDS. EQUIPMENT AND FACILITIES INCLUDE IN-HOUSE LABORATORIES, SPACE SIMULATION CHAMBERS, ROCKET AND BALLOON LAUNCH FACILITIES, AND TWO KC-135 AIRCRAFT FOR OPTICAL, UPPER ATMOSPHERIC AND IONOSPHERIC STUDIES.

INSTALLATION: HUMAN RESOURCES LABORATORY

BROOKS AFB, TX.

CDR. COL. ALFRED A. BOYD JR

CH. SCI. DR. EARL A. ALLUISIST

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	48.156	48.748
TOTAL PROCUREMENT	0.215	0.000
TOTAL O&M	2.549	4.555
TOTAL OTHER	3.036	3.602
TOTAL ANNUAL LAB	53.956	56.905
TOTAL INHOUSE	14.192	15.402
TOTAL INHOUSE RDT&E	11.330	11.800
ANNUAL OPERATING COST	2.678	2.378

PERSONNEL	PERSONNEL DATA (END OF FY 1983)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	134	11	75	59
CIVILIAN	240	47	145	95
TOTAL	374	58	220	154

ACRES	SPACE AND PROPERTY				COST (MILLION \$)	
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
5	81.180	58.219	56.132	195.531	6.521	75.215

#### ...MISSION

PLAN AND EXECUTE RESEARCH, EXPLORATORY DEVELOPMENT, AND ADVANCED DEVELOPMENT PROGRAMS IN TRAINING AND PERSONNEL SYSTEMS TECHNOLOGY.

#### ...CURRENT IMPORTANT PROGRAMS

MANPOWER AND PERSONNEL PROGRAMS IN SELECTION, CLASSIFICATION AND RETENTION; EDUCATION AND TRAINING PROGRAMS IN TECHNICAL TRAINING, FLYING TRAINING AND CREW AND TEAM TRAINING; SIMULATION AND TRAINING DEVICES PROGRAMS DEVELOPING FLIGHT AND MAINTENANCE TRAINING SIMULATORS; LOGISTICS PROGRAMS IN COMBAT MAINTENANCE.

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

THE ADVANCED SIMULATOR FOR PILOT TRAINING CONSISTING OF TWO COCKPITS ON A SIX DEGREES OF FREEDOM MOTION BASE WITH WIDE-ANGLE INFINITY VISUAL DISPLAYS AND A COMPUTER IMAGE GENERATION SYSTEM. THE ADVANCED INSTRUCTIONAL SYSTEM COMPUTER BASED TRAINING SYSTEM OFFERING INDIVIDUALIZED, ADAPTIVE TRAINING TO MAXIMIZE INDIVIDUAL LEARNING PERFORMANCE. THE UNIVAC 1100/81 COMPUTER SYSTEM USED FOR R&D IN ALL FACETS OF PERSONNEL SELECTION, TRAINING, MANAGEMENT AND RETENTION. THE BASIC RESEARCH TRAINING AND TESTING LABORATORY IS USED FOR EXPLORING NEW TECHNIQUES IN THE MEASUREMENT OF INDIVIDUAL DIFFERENCES IN LEARNING AND PERFORMANCE CAPABILITIES

INSTALLATION: MATERIALS LABORATORY

WPAFB, OH.

DIR. MR. GEORGE P. PETERSON

CH. SCI DR. HARRIS M. BURTE

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	83.472	85.158
TOTAL PROCUREMENT	52.395	57.500
TOTAL O&M	7.085	0.000
TOTAL OTHER	1.866	1.941
TOTAL ANNUAL LAB	144.818	144.599
TOTAL INHOUSE	5.984	6.711
TOTAL INHOUSE RDT&E	4.118	4.770
ANNUAL OPERATING COST	5.688	5.750

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	49	3	44	5
CIVILIAN	312	58	237	75
TOTAL	361	61	281	80

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
15	188.750	117.941	54.123	360.814	23.340	66.433

...MISSION

PLAN/EXECUTE EXPLORATORY AND ADVANCED DEVELOPMENT, AND ASSIGN BASIC RESEARCH PROGRAMS FOR MATERIALS, PROVIDE TECHNICAL AND MANAGEMENT ASSISTANCE FOR STUDIES, ANALYSIS, DEV PLANNING, TEST, EVAL, MOD AND OPERATION OF AEROSPACE SYS. MANAGE AF DIRECTED MANUFACTURING PROGRAMS.

...CURRENT IMPORTANT PROGRAMS

ADVANCED DEVELOPMENT OF LASER-HARDENED MATERIALS  
STRUCTURAL MATERIALS FOR AEROSPACE SYSTEMS  
THERMAL PROTECTION MATERIALS  
PROPULSION MATERIALS  
ELECTRONIC MATERIALS.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

MATERIALS RESEARCH AND DEVELOPMENT FACILITIES AND CAPABILITIES FOR AEROSPACE STRUCTURES, THERMAL PROTECTION SYSTEMS FOR BALLISTIC REENTRY VEHICLES AND ENGINES, FLUIDS, LUBRICANTS, FLUID CONTAINMENT, PROPULSION COATINGS, FIBERS, ELECTROMAGNETIC WINDOWS, SENSORS, LASER WINDOWS AND OPTICAL DEVICES, ELECTRICAL COMPONENTS, NON-DESTRUCTIVE TESTING, POLYMERS, ADHESIVES, NON-METALLIC MATRIX COMPONENTS, ELASTOMERS, METALS, ALLOYS, METAL MATRIX COMPOSITES, METAL PROCESSING, CERAMICS, STATIC AND DYNAMIC BEHAVIOR, GRAPHITE, ELECTRONIC/PHYSICAL/CHEMICAL ANALYSIS, OTHER MAJOR MATERIAL FUNCTIONS WHICH INCLUDE MANUFACTURING TECHNOLOGY, SYSTEMS APPLICATIONS, SYSTEMS SUPPORT AND THERMAL PROTECTION MATERIALS.



INSTALLATION: OFFICE OF SCIENTIFIC RESEARCH

WASHINGTON, D.C.

CDR. COL. JAMES E. BAKER

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	114.576	136.787
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.094	0.066
TOTAL OTHER	1.630	1.695
TOTAL ANNUAL LAB	116.300	138.548
TOTAL INHOUSE	1.724	1.761
TOTAL INHOUSE RDT&E	0.000	0.000
ANNUAL OPERATING COST	4.258	4.901

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	45	13	19	26
CIVILIAN	98	21	25	73
TOTAL	143	34	44	99

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
0	0.000	36.688	5.128	41.816	0.000	0.000

...MISSION

MANAGES THE AF RESEARCH PROGRAM, PREVENTS TECHNOLOGICAL SURPRISE,  
ASSISTS IN SOLVING TECHNOLOGICAL PROBLEMS, PROVIDES RESEARCH OPTIONS,  
ENHANCES THE CONTINUED SUPERIORITY OF THE AF OPERATIONAL CAPABILITY, AND  
ASSISTS IN THE TRANSITION OF RESEARCH TO DEVELOPMENT PROGRAMS.

...CURRENT IMPORTANT PROGRAMS

RELIABILITY MODEL FOR DEGRADABLE SYSTEMS  
SHORT WAVELENGTH LASERS  
OPTICAL SIGNAL PROCESSING.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

MANAGE THE AF RESEARCH PROGRAM AND SPONSOR EXTRAMURAL RESEARCH.

INSTALLATION: ROCKET PROPULSION LABORATORY

EDWARDS AFB, CA.

CDR. LT. COL. JOHN KOGER

DIR. MR. DON HART

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	44.605	43.700
TOTAL PROCUREMENT	0.012	0.015
TOTAL O&M	0.000	0.000
TOTAL OTHER	4.032	4.153
TOTAL ANNUAL LAB	48.649	47.868
TOTAL INHOUSE	18.603	19.568
TOTAL INHOUSE RDT&E	14.559	15.400
ANNUAL OPERATING COST	0.925	0.960

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	174	1	67	107
CIVILIAN	252	17	108	144
TOTAL	426	18	175	251

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
68345	419.046	86.848	4.780	510.674	126.000	27.180

...MISSION

CONDUCT THE AIR FORCE'S ROCKET PROPULSION AND INTERDISCIPLINARY SPACE TECHNOLOGY RESEARCH, EXPLORATORY, AND ADV DEVEL PROGRAMS FOR FUTURE ICBMS, AIR LAUNCHED MISSILES, SPACE VEHICLES, AND SATELLITES. PROVIDES ROCKET PROPULSION TECHNOLOGICAL SUPPORT TO DOD AND NON-DOD AGENCIES.

...CURRENT IMPORTANT PROGRAMS

PROVIDE PROPULSION OPTIONS FOR SMALL MOBILE BALLISTIC MISSILES. PROVIDE HIGH PERFORMANCE & PROPULSION FLEXIBILITY OPTIONS FOR TACTICAL MISSILES. PROVIDE LOW AIR LAUNCHED MISSILE PROPULSION SIGNATURE. PROVIDE PROPULSION OPTIONS FOR SPACE SYSTEMS DEPLOYMENT. DEMONSTRATE HIGHER PERFORMANCE NON-CONVENTIONAL PROPULSION CONCEPTS.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

LABORATORIES FOR SYNTHESIS, ANALYSIS AND FORMULATION OF NEW PROPELLANTS. FACILITIES FOR MIXING, CASTING, CURING AND TESTING SOLID ROCKET MOTORS. SOLID MOTOR EXPERIMENTAL COMPLEX FOR INVESTIGATION OF COMBUSTION, AGING, STRUCTURAL INTEGRITY, BALLISTIC PERFORMANCE AND HIGH TEMP COMPONENTS. LAB FOR EXPERIMENTATION OF SMALL ATTITUDE CONTROL AND SATELLITE PROPULSION SYSTEMS AND COMPONENTS UNDER SIMULATED SPACE ENVIRONMENTS. ALTITUDE EXPERIMENTATION OF LIQUID AND SOLID ROCKETS UP TO 50,000 POUNDS THRUST. AMBIENT EXPERIMENTATION OF LIQUID OR SOLID ROCKETS UP TO 10,000,000 POUNDS THRUST. IN-HOUSE ANALYTICAL CAPABILITY FOR DESIGN, ANALYSIS, AND DATA REDUCTION. SHOPS FOR FABRICATING EXPERIMENTAL HARDWARE AND SYSTEMS.

INSTALLATION: ROME AIR DEVELOPMENT CENTER

GRIFFISS AFB, N.Y.

CDR. COL. CHARLES F. STEBBINS

CH. SCI. DR. FRED I. DIAMOND

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	248.182	251.432
TOTAL PROCUREMENT	17.245	23.365
TOTAL Q&M	52.388	56.547
TOTAL OTHER	5.793	7.233
TOTAL ANNUAL LAB	323.608	338.577
TOTAL INHOUSE	37.485	39.355
TOTAL INHOUSE RDT&E	31.865	33.454
ANNUAL OPERATING COST	14.408	15.108

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	224	5	114	110
CIVILIAN	1108	62	629	479
TOTAL	1332	67	743	589

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1517	764.945	52.839	182.271	1000.055	29.595	56.243

...MISSION

CONDUCTS RESEARCH, EXPLORATORY AND ADVANCED DEVELOPMENT, TEST AND SELECTED ENGINEERING DEVELOPMENT AND ACQUISITION SUPPORT PROGRAMS IN SUPPORT OF COMMAND, CONTROL AND COMMUNICATIONS AND INTELLIGENCE ACTIVITIES.

...CURRENT IMPORTANT PROGRAMS

ADVANCED TACTICAL RADAR  
SPACE BASED RADAR  
COMMAND, CONTROL AND COMMUNICATIONS DECISION AIDS  
SATELLITE COMMUNICATIONS  
FIBER OPTICS

...FUNCTIONS/EQUIPMENT/CAPABILITIES

MAJOR AREAS OF TECHNOLOGY ARE ANTENNAS, SIGNAL PROCESSING, SOLID STATE COMPONENTS, THERMIONICS, OPTO-ELECTRONICS, RADIATION HARDENING, SYSTEM AND COMPONENT RELIABILITY, SOFTWARE, ARTIFICIAL INTELLIGENCE WITH EMPHASIS ON DECISION AIDS, AND RECONNAISSANCE AND INTELLIGENCE DATA HANDLING. MAJOR IN-HOUSE FACILITIES ARE: RECONNAISSANCE EXPLOITATION FACILITY, HIGH POWER FACILITY, DIGITAL COMMUNICATIONS EXPERIMENTAL FACILITY, R AND D COMPUTER FACILITY FEATURING TWO HONEYWELL 6180 COMPUTERS WITH MILTICS, RELIABILITY ANALYSIS CENTER, RADIATION EFFECTS FACILITY, EXPERIMENTAL PHOTOGAMMETRIC FACILITY, ECCM AND SIGNAL PROCESSING LABORATORY, SOLID STATE DEVICE FAILURE ANALYSIS FACILITY, EXPERIMENTAL DEVICE FABRICATION FACILITY, ELECTRO-MAGNETIC VULNERABILITY FACILITY FOR WEAPONS TESTING, SURVEILLANCE LABORATORY, AND MATERIALS SYNTHESIS AND DEVELOPMENT FACILITY.

INSTALLATION: SCHOOL OF AEROSPACE MEDICINE

BROOKS AFB, TX.

CDR. COL. DR. EDWARD MOSER

VICE CDR. COL. JEFFERY G. DAVIS

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	23.301	22.310
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.116	0.000
TOTAL OTHER	6.806	7.073
TOTAL ANNUAL LAB	30.223	29.388
TOTAL INHOUSE	21.018	20.613
TOTAL INHOUSE RDT&E	14.096	13.535
ANNUAL OPERATING COST	3 500	3.640

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	368	48	81	287
CIVILIAN	265	39	102	163
TOTAL	633	87	183	450

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
46	436.163	53.341	198.237	687.741	18.120	24.556

...MISSION

CONDUCT EXPLORATORY RESEARCH AND DEVELOPMENT PROGRAMS IN AEROSPACE BIOTECHNOLOGY, INCLUDES LIFE SUPPORT, AEROSPACE MEDICINE, BIOMEDICAL PROGRAMS AND RADIOBIOLOGY. PROVIDE MEDICAL EVALUATION AND CONSULTATION FOR AIRCREWS TO ASSURE RETENTION OF FLYING STATUS.

...CURRENT IMPORTANT PROGRAMS

CHEMICAL WARFARE DEFENSE.  
RADIATION AND DIRECTED ENERGY BIOEFFECTS.  
CREW READINESS AND PROTECTIVE EQUIPMENT.  
AEROMEDICAL ASPECTS OF AEROSPACE OPERATIONS.  
SPACE BIOTECHNOLOGY.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

RESEARCH IN AEROSPACE MEDICAL PROBLEMS, LIFE SUPPORT, ENVIRONMENTAL STRESS, RADIOBIOLOGY, LASER, BIOMETRICS, BIOMED ENGINEERING, RDTE ON MEDICAL EQUIPMENT AND SYSTEMS, WHOLE BODY COUNTER, HUMAN CENTRIFUGE, TESTING CELLS, RESEARCH CHAMBERS, TELETHERAPY COBALT 60 RADIATION SOURCE, RADIOFREQUENCY RADIATION FACILITY, ELECTRON MICROSCOPE SYSTEM, REMOTE INTERACTIVE GRAPHIC TERMINAL SYSTEM, THERMAL CHAMBER, CARDIAC CATH LAB, AEROSP MED SCIENCE LAB, LASER HAZARD FACILITIES, AEROMEDICAL LIBRARY, AEROSP MED EVALUATION AND CONSULTATIVE SERVICES, OPTICAL RESEARCH AUDIOLOGY, VESTIBULAR STUDIES, PSYCHOBIOLOGY, RADIOISOTOPE, AEROMED STANDARDS, MODELING, BIOMED RESEARCH, MEDICAL REPOSITORIES, RADIATION SCIENCES RESEARCH, BIODYNAMICS RESEARCH, DEVELOP ENGINEERING.

INSTALLATION: WEAPONS LABORATORY

KIRTLAND AFB, N.M.

CDR COL T. M. JOHNSON VCDR COL J. M. WALTON

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	224.824	260.002
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	17.399	18.269
TOTAL ANNUAL LAB	242.223	278.271
TOTAL INHOUSE	95.944	109.095
TOTAL INHOUSE RDT&E	78.545	90.826
ANNUAL OPERATING COST	15.414	15.106

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	649	30	427	222
CIVILIAN	523	57	308	215
TOTAL	1172	87	735	437

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
702	655.000	130.000	182.000	967.000	75.595	93.530

...MISSION

RESPONSIBLE FOR EXPLORATORY, ADVANCED, AND ENGINEERING DEVELOPMENT IN NUCLEAR WEAPONS EFFECTS, COMPONENTS, NUCLEAR SURVIVABILITY/VULNERABILITY, HIGH ENERGY LASER SYSTEMS, ADVANCED WEAPON CONCEPTS AND TECHNOLOGY, AND NUCLEAR SAFETY.

...CURRENT IMPORTANT PROGRAMS

ADVANCED RADIATION TECHNOLOGY  
ADVANCED WEAPON TECHNOLOGY  
NUCLEAR SURVIVABILITY/VULNERABILITY ANALYSIS AND TESTING  
NUCLEAR SAFETY ANALYSIS AND DESIGN CRITERIA  
NUCLEAR WEAPONS EFFECTS ANALYSIS AND TESTING

...FUNCTIONS/EQUIPMENT/CAPABILITIES

NUCLEAR WEAPONS EFFECTS SIMULATION, SAFETY, COMPONENT ASSESSMENT AND ANALYSIS OF WEAPONS SYSTEMS NUCLEAR HARDNESS ARE CONDUCTED IN ENGINEERING TEST LABORATORIES AND PHYSICS LABORATORIES. SIMULATION TESTS ON MISSILES, AIRCRAFT, AND COMPONENTS USE ELECTROMAGNETIC PULSE SIMULATORS, GAS GUNS, AND X-RAY DEVICES. CIVIL ENGINEERING PROGRAMS USE SHOCK TUBES AND HIGH EXPLOSIVES FOR SIMULATION OF NUCLEAR BLAST AND SHOCK. LASER SYSTEMS DEVELOPMENT USES LASER/OPTICS LABORATORIES AND TEST RANGES WITH LARGE, HIGH POWER DEVICES. A TECHNICAL LIBRARY, METALLURGY AND METROLOGY LABORATORIES, 1 CRAY, 2 CDC-730 AND 1 IBM-4341 COMPUTERS WITH REMOTE ACCESS TERMINALS AND MULTI-CHANNEL SENSING/RECORDING AND DATA REDUCTION SUPPORT ALL REQUIRING RDT/E PROGRAMS.

INSTALLATION: WESTERN SPACE AND MISSILE CENTER

VANDENBERG AFB, CA.

CDR. COL. LAWRENCE L. GOOCH

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	2.000	2.700
TOTAL PROCUREMENT	10.042	15.942
TOTAL O&M	119.996	127.022
TOTAL OTHER	10.150	11.608
TOTAL ANNUAL LAB	142.188	157.272
TOTAL INHOUSE	139.888	39.716
TOTAL INHOUSE RDT&E	0.000	0.000
ANNUAL OPERATING COST	0.000	0.000

PERSONNEL	PERSONNEL DATA (END OF FY 1983)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	442	2	302	140
CIVILIAN	415	3	308	107
TOTAL	857	5	610	247

ACRES	SPACE AND PROPERTY SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
55860	914.964	568.103	607.327	2090.394	180.000	300.000

...MISSION

OPERATE THE WESTERN TEST RANGE TO SUPPORT FIELD TEST AND LAUNCH OPERATIONS FOR A VARIETY OF GOVERNMENT RANGE USERS.

...CURRENT IMPORTANT PROGRAMS

PEACEKEEPER MISSILE SYSTEM  
MINUTEMAN III OPERATIONAL TESTING PROGRAM  
SPACE TRANSPORTATION SYSTEM  
SPACE LAUNCH PROGRAMS USING TITAN, ATLAS AND SCOUT BOOSTERS  
RANGE SUPPORT TO GUIDED MISSILES AND AERONAUTICAL TEST PROGRAMS.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

WSMC CAPABILITIES INCLUDE TEST LAUNCH AND RANGE SUPPORT. TEST LAUNCH INCLUDES: ASSEMBLY AND PRELAUNCH TESTING OF LAUNCH VEHICLE SYSTEMS USING ATLAS, TITAN AND MM BOOSTERS; PAYLOAD AND VEHICLE INTERGRATION/CHECKOUT; AND LAUNCH CONTROL/SAFETY. WESTERN TEST RANGE SUPPORT INCLUDES NEAR AND FAR TERM RANGE INSTRUMENTATION PLANNING, AND DATA GATHERING ON BALLISTIC/SPACE/GUIDED MISSILES; AIRCRAFT AND OTHER TESTS AT UPRANGE AND DOWNRANGE LOCATIONS. RADAR, TELEMETRY, OPTICAL, DATA PROCESSING, COMMUNICATIONS, AND COMMAND CONTROL SYSTEMS ARE AVAILABLE. LAUNCH AZIMUTHS VARY FROM 140 TO 313 DEGREES. AERONAUTICAL TESTS ARE CONDUCTED IN AN INSTRUMENTED OFFSHORE OPERATING AREA. LAUNCH FACILITIES AND RANGE INSTRUMENTATION CAN BE RECONFIGURED TO MEET PROGRAM REQUIREMENTS.

INSTALLATION: 4950 TEST WING

WPAFB, OH.

CDR. COL. J. K. GLENN

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	81.321	86.801
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	2.441	2.368
TOTAL OTHER	20.506	21.224
TOTAL ANNUAL LAB	104.268	110.393
TOTAL INHOUSE	75.024	85.268
TOTAL INHOUSE RDT&E	52.080	61.679
ANNUAL OPERATING COST	0.000	0.000

PERSONNEL	PERSONNEL DATA (END OF FY 1983)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	918	0	41	877
CIVILIAN	1046	0	102	944
TOTAL	1964	0	143	1821

ACRES	SPACE AND PROPERTY				COST (MILLION \$)	
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
205	0.000	132.249	780.414	912.663	14.260	748.918

...MISSION

DOD MAJ TEST FAC. PERFORMS T&E ON MIL SYS, SUBSYS, AND COMP. OPER & MAIN  
ASGN TEST SUP ACFT AND ANCIL EQUIP. MANAGES A CENTRAL FAC FOR MAJ MOD OF  
AFSC ACFT. OPER SHOP FAC IN SUP OF CMD ACFT CLASS II MODS AND AFWAL R&D  
PROGMS. PROVIDES FLT TST ENGRG. TECH DATA ACQ. AND TECH PHOTO SVCS.

...CURRENT IMPORTANT PROGRAMS

TRIDENT  
SUPPORT TO AIR LAUNCHED CRUISE MISSILE (ALCM)  
JOINT SURVEILLANCE AND TARGET ATTACK RADAR SYSTEM (JOINT STARS)  
NAVSTAR GLOBAL POSITIONING SYSTEM  
SATELLITE COMMUNICATION SYSTEM (SATCOM).

...FUNCTIONS/EQUIPMENT/CAPABILITIES

TEST SUPPORT AIRCRAFT (ARIA EC-135) PROVIDE GLOBAL SUPPORT  
ALL AFSC MAJOR CLASS II AIRCRAFT MODIFICATIONS  
MISSILE LAUNCH/REENTRY TRACKING AND DATA RELAY  
1400 SQUARE MILE RESTRICTED TEST AREA IN OHIO  
FLIGHT TEST ENGINEERING (AERO-MECH, AVIONICS, ANALYSIS, INSTRUMENTATION)  
TEST DATA ACQUISITION/PROCESSING/ANALYSIS  
2 OPERATIONAL SQS (FLIGHT CREWS), 3 MAINTENANCE SQS, AND 2 DETACHMENTS  
SPECIALIZED FABRICATION AND MODELING EQUIPMENT  
COMPUTER AIDED DESIGN/MANUFACTURING (CAD/CAM) CAPABILITY  
TECHNICAL PHOTOGRAPHIC INSTRUMENTATION & PROCESSING  
LARGEST PMEL IN AF  
ASD LABORATORY MATERIAL CONTROL ACTIVITY.

INSTALLATION: 6585TH TEST GROUP

HOLLOMAN AFB, N.M.

CDR. COL. LAURENCE J. THOMSON

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	28.839	31.904
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	6.273	7.000
TOTAL OTHER	6.086	5.434
TOTAL ANNUAL LAB	41.198	44.338
TOTAL INHOUSE	24.662	27.462
TOTAL INHOUSE RDT&E	19.386	22.028
ANNUAL OPERATING COST	0.562	0.428

PERSONNEL DATA (END OF FY 1983)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	322	2	78	244
CIVILIAN	276	3	101	175
TOTAL	598	5	179	419

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
7052	386.000	12.000	165.000	563.000	188.657	49.375

...MISSION

DOD FOCAL POINT FOR FLIGHT, LAB & SLED T&E OF INERTIAL GUIDANCE SYSTEMS. HIGH SPEED TRACK FOR AERODYNAMIC, EJECTION, IMPACT, RAINFIELD, GUIDANCE. RADAR CROSS SECTION & ANTENNA PATTERNS OF SPACECRAFT, RVS, A/C. A/C SUPPORT FOR IN-HOUSE AND TRANSIENT REQUIREMENTS.

...CURRENT IMPORTANT PROGRAMS

PEACEKEEPER GUIDANCE SYSTEM & COMPONENTS TESTING  
A/C NAVIGATION SYSTEM VERIFICATION TESTING, PROJECT 688G  
B-1B AVIONICS TESTING  
AMRAAM RADAR CROSS SECTION TESTING  
ADVANCED GUIDANCE TECHNOLOGY TESTING IN SUPPORT OF ABRES.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

1-260IN/2-100IN PRECISION CENTRIFUGE. PRECISION GRND/ABN TEST FACILITY  
PRECISION REFERENCE/DATA COLLECTION, ENVIRONMENTAL CHAMBERS/INERTIAL  
NAV TEST VAN, 50,799 FT TEST TRACK, 35,588 FT 2 RAIL/15,200 FT 3 RAIL.  
5 BLOCKHOUSES, 2 INTRM STATIONS, 9,000 FT TRACKSIDE RAINFIELD, 2,000  
FT BALLISTIC RAINFIELD, ROCKET SLED/PROPULSION SYS, RADAR TARGET SCATTER  
FAC, 30 MHZ TO 95 GHZ, MEASURE MONOSTATIC/BISTATIC AMP, PHASE, DOPPLER,  
GLINT, JET ENGINE MODULATION, MODEL MAKING.



INSTALLATION: ARMED FORCES RADIOBIOLOGY RSCH. INSTITUTE

BETHESDA, MD.

CDR. COL. BOBBY R. ARCOCK

PROGRAM DATA BY FISCAL YEAR (MILLION \$)		
PROGRAM	1983 (ACTUAL)	1984 (ACT + EST)
TOTAL RDT&E	11.443	12.250
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	3.090	3.380
TOTAL ANNUAL LAB	14.533	15.630
TOTAL INHOUSE	14.533	15.630
TOTAL INHOUSE RDT&E	11.443	12.250
ANNUAL OPERATING COST	2.780	2.950

PERSONNEL DATA (END OF FY 1983)				
PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	88	18	46	42
CIVILIAN	139	18	53	86
TOTAL	227	36	99	128

SPACE AND PROPERTY						
ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
10	26.523	16.047	56.540	99.110	13.415	16.208

#### ...MISSION

THE MISSION OF AFRRRI SHALL BE TO CONDUCT RESEARCH IN THE FIELD OF RADIOBIOLOGY AND RELATED MATTERS ESSENTIAL TO THE OPERATIONAL AND MEDICAL SUPPORT OF THE DEPARTMENT OF DEFENSE AND THE MILITARY SERVICES

#### ...CURRENT IMPORTANT PROGRAMS

DEFINE PHYSIOLOGICAL/PATHOLOGICAL RESPONSE IN HUMANS TO RADIATION.  
ASSESS EFFECTS OF COMBINED INJURIES, MILITARY FORCES/NONCOMBATANTS.  
DATA FOR PREDICTION OF COMBAT INEFFECTIVENESS AND CASUALTY PRODUCTION.  
TREATMENT METHODS FOR CASUALTIES FROM RADIATION/COMBINED INJURY.  
INSTRUCTION TO ARMED SERVICES ON TREATMENT OF NUCLEAR CASUALTIES.

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

FUNCTIONS: OPERATE FACILITIES FOR CONDUCTING RADIOBIOLOGY RESEARCH AND DISSEMINATING RESULTS: CONDUCT ADVANCED TRAINING: PROVIDE ANALYSIS CONSULTATION ON BIOEFFECTS OF RADIATION AND PERFORM OTHER SUCH RESEARCH FUNCTIONS AS REQUIRED. MAJOR EQUIPMENT INCLUDES: PULSE AND STEADY STATE NUCLEAR REACTOR, 200,000-CURIE COBALT-60 IRRADIATOR, ELECTRON LINEAR ACCELERATOR, X-RAY AND THERATRON  
EXPOSURE CAPABILITY  
SUPPORT SERVICES INCLUDE: MEASUREMENT OF RADIATION FIELDS, PROVISION AND CARE OF LABORATORY ANIMALS, EQUIPMENT DESIGN AND FABRICATION ASSISTANCE, REAL-TIME DATA ACQUISITION SYSTEM, TELEVISION AND FILM DOCUMENTATION OF EXPERIMENTS, PERSONNEL AND ENVIRONMENTAL MONITORING, EDITORIAL ASSISTANCE IN REPORT PREPARATION, AND A LARGE TECHNICAL LIBRARY

APPENDIX I

DISESTABLISHMENT, ESTABLISHMENT OR CHANGES IN ORGANIZATION OR NAME\*

DEPARTMENT OF THE ARMY

Belvoir R&D Center Ft Belvoir, VA	Established
Chemical Systems Laboratory Aberdeen Proving Ground, MD	Disestablished
Chemical Systems R&D Center Aberdeen Proving Ground, MD	Established
Mobility Equipment R&D Command Ft Belvoir, VA	Disestablished
Natick R&D Laboratories Natick MA	Disestablished
Natick R&D Center Natick MA	Established
Tank-Automotive Command Laboratories Warren, MI	Disestablished
Tank-Automotive R&D Center Warren, MI	Established

DEPARTMENT OF THE NAVY

NONE

DEPARTMENT OF THE AIR FORCE

NONE

\* Changes since publication of Department of Defense In-house RDTE Activities,  
30 October 1982.

## APPENDIX II

### DEFINITIONS

1. **IN-HOUSE RDTE ACTIVITIES**—Those organizational entities engaged in performing work in any or all of the categories of research, development, test, and evaluation. The RDTE effort, however, should represent a minimum of 25 percent of the total effort of each entity reporting in order to be considered as an RDTE activity.

2. **PROFESSIONALS**—Full-time government scientific and engineering personnel actively engaged in RDTE activities. In the case of civilians this will include all those holding positions that fall into the following categories under the Civil Service Occupational Groups and Series of Classes, General Schedule:

101 Social Science	660 Pharmacist
150 Geography	662 Optometrist
180 Psychology	665 Speech Pathology and Audiology
184 Sociology	668 Podiatrist
190 General Anthropology	680 Dental Officer
193 Archeology	690 Industrial Hygiene
401 Biology	695 Food and Drug Officer
403 Microbiology	696 Consumer Safety
405 Pharmacology	701 Veterinary Medical Science
408 Ecology	801 General Engineering
410 Zoology	803 Safety Engineering
413 Physiology	804 Fire Prevention Engineering
414 Entomology	806 Materials Engineering
430 Botany	807 Landscape Architecture
434 Plant Pathology	808 Architecture
435 Plant Physiology	810 Civil Engineering
436 Plant Protection and Quarantine	819 Sanitary Engineering
437 Horticulture	830 Mechanical Engineering
440 Genetics	840 Nuclear Engineering
454 Range Conservation	850 Electrical Engineering
457 Soil Conservation	855 Electronic Engineering
460 Forestry	858 Biomedical Engineering
470 Soil Science	861 Aeronautics Engineering
471 Agronomy	871 Naval Architecture
480 General Fish & Wildlife	880 Mining Engineering
482 Fishery Biology	881 Petroleum Engineer
486 Wildlife Biology	890 Agriculture Engineering
487 Animal Science	892 Ceramic Engineering
493 Home Economics	893 Chemical Engineering
601 General Health	894 Welding Engineering
602 Medical Officer	896 Industrial Engineering
	1221 Patent Adviser
	1222 Patent Attorney
	1223 Patent Classifying
	1224 Patent Examining
	1225 Patent Interference Examining

1220 Design Patent Examining	1370 Cartography
1301 General Physical Science	1372 Geodesy
1306 Health Physics	1380 Forest Products Technology
1310 Physics	1382 Food Technology
1313 Geophysics	1384 Textile Technology
1315 Hydrology	1386 Photographic Technology
1320 Chemistry	1510 Actuary
1321 Metallurgy	1515 Operations Research
1330 Astronomy and Space Science	1520 Mathematics
1340 Meteorology	1529 Mathematical Statistician
1350 Geology	1530 Statistician
1360 Oceanography	1540 Cryptography
	1550 Computer Sciences

Military professionals, both officer and enlisted, actively engaged in RDTE activities could be identified with the functions described in the above referenced civilian job series. Lawyers, accountants, chaplains, social workers, and educators should be excluded.

3. **TECHNICIANS**—Generally nonprofessionals working on an RDTE project or program in support of a professional. In the case of civilians, it will include, but will not necessarily be limited to, those holding positions that fall into the following categories of the Civil Service Occupational Groups and Series of Classes, General Schedule:

102 Social Science Technician	681 Dental Assistant
181 Psychological Technician	682 Dental Hygienist
404 Biological Technician	683 Dental Laboratory Technician
421 Plant Protection Technician	684 Public Health Dental Hygienist
455 Range Technician	685 Public Health Program Specialist
458 Soil Conservation Technician	688 Sanitarian
462 Forestry Technician	698 Environmental Health Technician
603 Physician Assistant	699 Health Technician
621 Nurse Assistant	704 Animal Health Technician
622 Medical Supply Aid	802 Engineering Technician
625 Autopsy Attendant	817 Surveying Technician
636 Rehabilitation Therapy Asst	818 Engineering Drafting
642 Nuclear Medicine Technician	856 Electronics Technician
644 Medical Technologist	895 Industrial Engineering Technician
645 Medical Technician	1202 Patent Technician
646 Pathology Technician	1311 Physical Science Technician
647 Medical Radiology Technician	1316 Hydrologic Technician
648 Therapeutic Radiological Technologist	1341 Meteorological Technician
649 Medical Machine Technician	1371 Cartographic Aid
650 Medical Technical Assistant	1374 Geodetic Technician
661 Pharmacy Technician	1521 Mathematics Technician
664 Restoration Technician	1531 Statistical Clerical & Administrative
667 Orthotist and Prosthetist	1541 Cryptanalysis
669 Medical Record Librarian	

Discretion will have to be exercised by each RDTE activity in determining the number of military technicians. Generally, they should follow the guidelines established in defining civilian technicians and can be identified in DOD 1312.1-E.

4. **REAL PROPERTY COST**—Each reporting activity will be responsible for determining and reporting the cost of real property. This cost should be established in accordance with the guidelines and definitions in DOD Instruction 4165.14. This should also include the cost of installed equipment.

5. **EQUIPMENT COST**—Each reporting activity will be responsible for determining and reporting the cost of personal property. This cost should be established in accordance with the guidelines and definitions in DOD Instruction 4165.14. This should also include the cost of installed equipment.

6. **SPACE**—The data to be furnished should include only walled and roofed building space. It should not include such things as parking lots, open storage areas, lean-tos, etc. The source of data may be the annual report submitted in compliance with the requirements of DOD Instruction 4165.14.

7. **IN-HOUSE OBLIGATIONS**—Obligations reported under this category are for activities performed, or to be performed, by the organizational entity. Their work is carried on directly by their own personnel. Particular care should be taken to include under in-house performance the cost of supplies and equipment essentially of an off-the-shelf nature that are procured for use in in-house research and development, plus such things as travel, publications, and other types of services in support of in-house functions and M.P.A. Excluded from the in-house total are expenses for planning and administering programs by DOD personnel of contracts and grants for out-of-house work and M.C.A.

8. **OUT-OF-HOUSE OBLIGATIONS**—Obligations reported under this category are for activities performed, or to be performed, by other than the organizational entity. Out-of-house performers may include other departmental or DOD organizational entities, industrial firms, educational institutions, not-for-profit institutions, and private individuals. Included as out-of-house work are all expenses paid the out-of-house performers, as well as the expenses incurred in planning and administering these programs by personnel of the organizational entity. This would also include travel and other supporting services.

9. **ANNUAL OPERATING COST**—This should generally reflect the overhead cost of operating the laboratory or facility. It should include such things as costs of utilities, rents, janitorial services, guard and fire protection, support services such as supply personnel, printing, maintenance of buildings and grounds, etc. It should not include the salaries of direct labor personnel such as scientists, engineers, technicians, draftsmen, machinists, etc.

### APPENDIX III

#### Selected Standard Abbreviations and Acronyms

AAM — air-to-air missile	GCA — ground-controlled approach
AAW — antiair warfare	
ADPE — automatic data-processing equipment	HF — high-frequency
AEDC — Arnold Engineering Development Center	IFF — identification, friend or foe
AFSC — Air Force Systems Command	IR — infrared
AFWET — Air Force weapons effectiveness testing	MPT — military potential test
APG — Aberdeen Proving Ground	NAF — Naval Air Facility
ARPA — Advanced Research Projects Agency	NASA — National Aeronautics and Space Administration
ASW — antisubmarine warfare	NASC — Naval Air Systems Command
AUS — Army United States	NAVORD — Naval Ordnance Systems Command
	NAVSHIP — Naval Ship Systems Command
	NEMP — nuclear electromagnetic propagation
BIS — Board of Inspection and Survey	PI — product improvement
BW — biological warfare	POL — petroleum oil, lubricants
CBR — chemical, biological radiological	QA — quality assurance
CE — Chief of Engineers, Army	QMDO — qualitative materiel development objective
CG — commanding general	QMR — qualitative materiel requirement
CNO — Chief of Naval Operations	
COMMEL — communications electronics	RDTE — Research, development, test and evaluation
	RF — radio frequency
DA — Department of the Army	RV — reentry vehicle
DARCOM — Department of the Army Materiel, Development, and Readiness Command	
DASA — Defense Atomic Support Agency	SATS — short airfield tactical support
DOD — Department of Defense	SDR — small development requirement
DZ — drop zone	SI — ship installation
	SP — self-propelled
	ST — service test
ECM — electronic countermeasures	T&E — test and evaluation
ED — engineering development	
EDT — engineering development & test	UDT — underwater demolition team
EEG — electroencephalogram	ULMS — Undersea Long-Range Missile System
EKG — electrocardiogram	USATECOM — US Army Test and Evaluation Command
ELINT — electronic intelligence	UTTAS — utility tactical transport aircraft system
EMP — electromagnetic propagation	USW — undersea warfare
EMW — electromagnetic warfare	UV — ultraviolet
EODC — Explosive Ordnance Disposal Center	
ET — engineering artillery	V/STOL — vertical/short takeoff and landing
FA — field artillery	
FEM — fleet ballistic missile	

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